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ABSTRACT

The wide and growing discrepancy in mortality rates between the minority populations of Blacks, Hispanics, Arab Americans, Asian/Pacific Islanders, and Native Americans and the White population of the State of Michigan make improving minority health status a matter of simple justice. Section I, "Introduction and Overview," comprises chapter 1, "Minorities in Michigan," which analyzes State demographics. Section II, "Major Causes of Excess Minority Deaths," analyzes specific health problems and comprises the following chapters: (2) "Cardiovascular and Cerebrovascular Disease"; (3) "Diabetes"; (4) "Cancer"; (5) "Chemical Dependency"; (6) "Violence and Injury"; and (7) "Low Birth Weight and Infant Mortality." Section III, "Special Problems," investigates health factors and subpopulations and comprises the following chapters: (8) "Nutrition and Hunger"; (9) "Environmental Hazards"; (10) "AIDS"; (11) "Tuberculosis"; (12) "Problems of Children"; and (13) "Problems of the Elderly." Section IV, "Systemic Issues," examines social and economic barriers and comprises chapter 14, "Access to Care," and chapter 15, "Jobs and Education." Section V, "Areas for Intervention," reviews areas in which programs can have a positive impact and comprises the following chapters: (16) "Smoking Prevention and Cessation"; (17) "Hypertension Prevention and Control"; (18) "Diabetes Education"; (19) "Reducing Violence and Injury"; (20) "Reducing Low Birth Weight and Infant Mortality"; (21) "Reducing Environmental Hazards"; and (22) "Improved Nutrition and Access to Food." Section VI, "Recommendations," proposes steps to close the gap in health status between minorities and Whites. Each chapter includes a list of references. Statistical data are included on nine graphs and 43 tables. A glossary is appended. (FMW)

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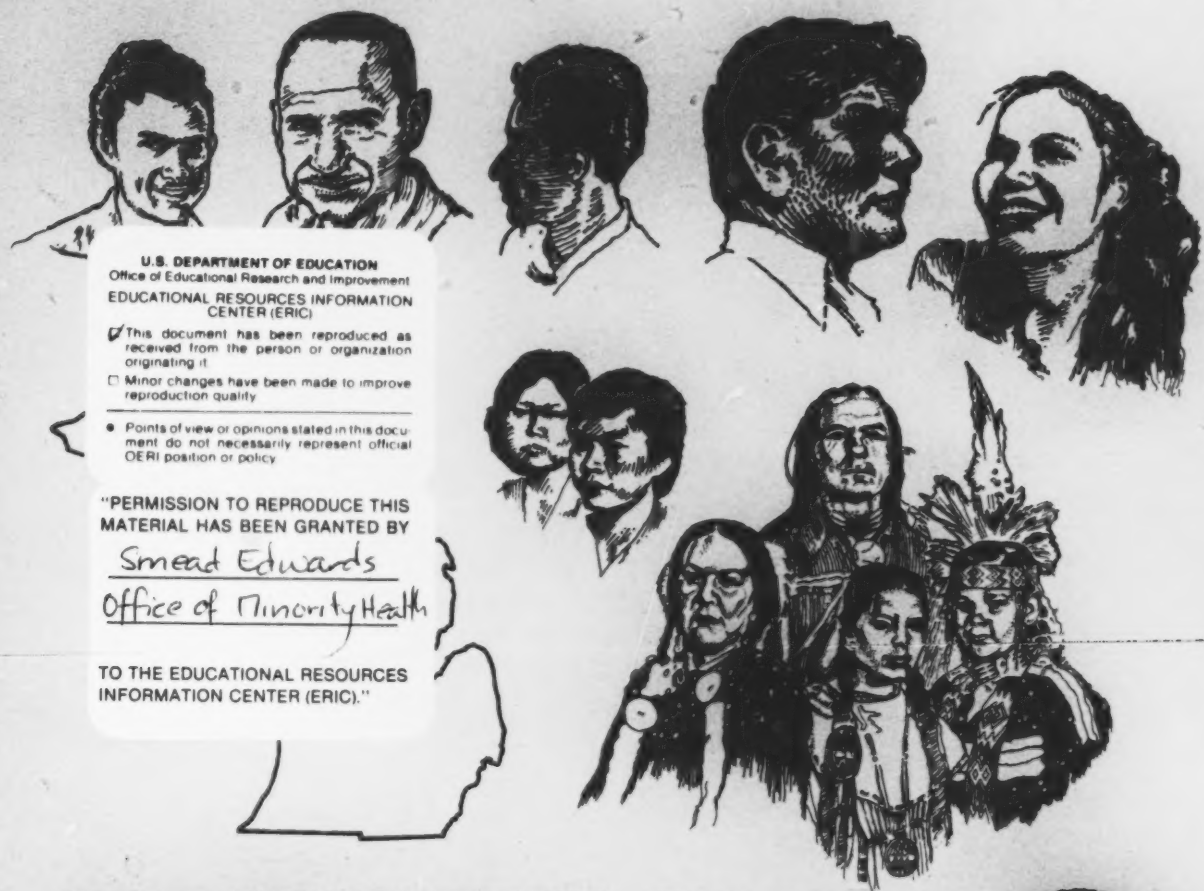

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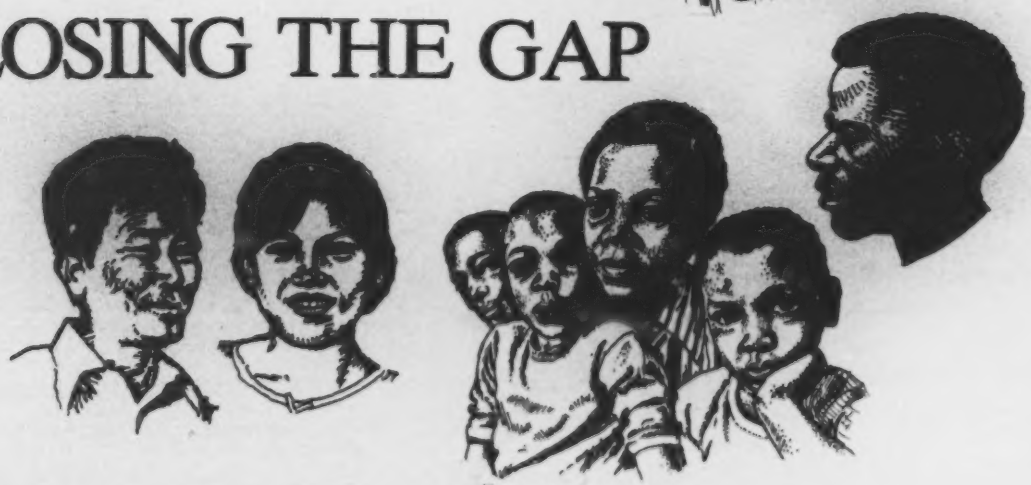

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MINORITY HEALTH IN MICHIGAN: CLOSING THE GAP

1988

Foreword

There is a distressingly wide, and in some cases, growing gap in health status between the minority Black, Hispanic, Arab American, Asian/Pacific Islander, and Native American population and the majority population in Michigan. Heart disease, cancer and homicide death rates are all rising for minorities. The minority infant mortality rate as well as the mortality rates for diabetes, accidents, and cirrhosis are, at best, stagnating.

In 1985, Michigan's minority death rate exceeded the national level by 18 percent.

The pervasiveness and severity of health problems experienced by Michigan minorities led former state health director Dr. Gloria Smith to convene a group of scientists, health professionals and public policy leaders to examine the nature and causes of the discrepancy in health status between minorities and Whites and to recommend potential remedies to close this gap. I strongly endorsed this initiative and now believe that closing the minority health gap should be the number one priority for the public health community.

All of Michigan has a major stake in improving the health of the minority population. With nearly one in five residents now belonging to a minority group, our ability to be economically competitive in a highly technological society depends on good health and high educational levels in both the White and minority communities. Additionally, our efforts to reduce health care costs and improve the overall quality of life in our state will depend on progress being made by all groups in reducing rates of illness and injury.

We now have sufficient data to both awaken our sensitivity and guide policy initiatives.

As the task force report unfolds, it will be apparent that positive results will not be easily attained, but will require persistent and continuing attention now and in the years ahead. Decisive and coordinated action on the part of business, labor, government, voluntary agencies and individuals to faithfully implement the six major recommendations will bring us closer together and benefit the entire state.

Accordingly, I wish to thank the leadership and members of the Task Force on Minority Health Affairs, not only for a job well done, but for a job well begun.

Raj M Wiener

We now have sufficient data to both awaken our sensitivity and guide policy initiatives.

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SUMMARY OF FINDINGS

The wide discrepancy in mortality rates between the minority population of Blacks, Hispanics, Arab Americans, Asian/Pacific Islanders, and Native Americans and the White population appears to be growing. For a number of causes of death, minorities have experienced increases in mortality rates in recent years.

The minority population in Michigan has increased rapidly in recent years. The current 1985 minority population estimate, which adjusts for past under-counting, is almost 1.8 million or nearly one in five of all Michigan residents.

Improving minority health status is a matter of simple justice. Also, a concentrated effort designed to reduce health risk factors and improve access to care for minorities will bring economic and social benefits to the state as a whole. For what state, or what nation, can long survive if one-fifth of its population fails to reach its full potential and make its unique gifts available to society?

Excess Minority Deaths

Michigan age-adjusted death rates in 1985 were higher for minorities than for Whites for the four leading causes of death and for seven of the ten leading causes. Rates for minorities were 27 percent higher for both diseases of the heart and for cancer, the two leading causes of death. Overall, the age-adjusted death rate was 48 percent higher for minorities than for Whites.

If there were no disparity in death rates, there would have been 3,241 fewer minority deaths in 1985 (a total of 7908 deaths instead of the actual total of 11,149). Minority excess deaths are those which would not have occurred if the mortality rates for minorities had been the same as the rates for the White majority.

The major causes of excess deaths to minorities in 1985 were:

CONDITION	1985 EXCESS MINORITY DEATHS
Heart Disease	658
Homicide	653
Cancer	473
Infant Mortality	289
Liver Disease	209
Stroke	206
Diabetes	91
Accidents	32

Nutrition and Hunger

Access to food for the poor has emerged as an issue in Michigan as well as the rest of the nation. Today the isolated elderly, poor children at school and pregnant women are the most affected by these federal cut-backs for food programs. Many of those who lack access to adequate food resources are minorities.

Environmental Hazards

A number of environmental hazards have a greater impact on members of minority communities than on the general population. The quality of housing has a significant effect on health status. Estimates indicate that as many as 17 percent of Michigan dwelling units today are substandard. Minorities, especially in our inner cities, occupy a disproportionate share of these substandard homes. It is estimated that some 45,000 persons work in Michigan each year as migrant agricultural laborers; some 80 percent of these workers are Mexican Americans. Those working in agriculture are at increased risk for accidents and for such diseases as leukemia, multiple myeloma, lymphoma and cancer of the prostrate and stomach.

Problems of Children and the Elderly

Both children and the elderly are more vulnerable than other members of society. Special attention needs to be paid to their health needs, and this is particularly the case for minority children and

elderly whose economic and social circumstances lead to greater health problems and poorer access to health care.

Access to Care

Physical access is a problem in rural areas because of the great distances to be traveled for routine primary care and hospital care. In urban areas, the public transportation depended upon by minorities is often expensive or unavailable at the time of day when services are needed. Persons unable to afford health care often do not seek it until forced to do so by the severity of the illness. Providers of health care are often unwilling to provide services to persons with no obvious means of paying for the care. Minorities are less likely to have health insurance coverage than non-minorities. Cultural barriers to health care are a concern for all minority groups and language barriers are significant for many Hispanics, Asian and Pacific Islanders, and Arabs.

Jobs and Education

Historically, minority groups have experienced discrimination that has placed a disproportionately large segment of their members in depressed economic situations. Some economic indicators show not only a slowing of progress but of regress in the status of minorities in recent years. Since 1975, the overall share of Black employment declined despite the relative increase in the Black population. Unemployment rates have continued to rise for minority group members in the 1980s despite an overall improvement in the unemployment rate for the state as a whole. The Black youth unemployment rate in Michigan has not dropped below 50 percent since 1980 and has ranged as high as 68.3 percent in 1983. The systemic problems of high unemployment levels for minorities and inequality in the educational arena are interrelated. Jobs at decent wages are a vital factor in family formation and maintenance. A supportive family environment and hope for a future are both important factors in educational success. Minority high school drop-out rates are tragic, as dropping out often leads to unemployment or low wage dead-end jobs. The latest drop-out figures indicate that yearly drop out rates for Hispanics and Blacks are more than double that of White children.

Interventions

Interventions in a number of areas can have an impact on minority health in Michigan. Among the areas reviewed were: smoking prevention and cessation; hypertension prevention and control; diabetes education; reduction of low birth weight and infant mortality; reduction of environmental hazards; reduction of violence and injury. In many of these areas, innovations in the policy arena can contribute to improved outcomes.

Major Recommendations

The following major recommendations are presented by the Task Force on Minority Health Affairs to close the gap in health status between the Blacks, Native Americans, Hispanics, Asians and Pacific Islanders, Arab Americans and the White population in Michigan.

The complete discussion of recommendations appears in Chapter Twenty Three.

Immediate Action:

I. An Office of Minority Health should be established in the Department Of Public Health.

II. Data collection on minority health status must be improved by state and local public health system, hospitals and other health agencies.

By 1990:

III. The Department Of Public Health and the Governor's Human Services Cabinet Council should encourage private businesses, labor unions, religious organizations, community groups and civic groups to include closing the minority health gap among their highest priorities.

IV. Significant programs to improve minority health status should be funded. Health promotion, disease prevention, and risk reduction should be areas of special emphasis.

V. Awareness of minority health concerns should be expanded and educational opportunities for minorities in the health professions should be increased.

VI. The Human Services Cabinet should work to identify and implement additional recommendations from recent task forces and advisory bodies which impact on minority health.

Minority Health In Michigan: Closing The Gap

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Section I

INTRODUCTION AND OVERVIEW

Chapter One

MINORITIES IN MICHIGAN

Background

In 1985, the federal *Report of the Secretary's Task Force on Black and Minority Health* authoritatively documented the wide disparity in health status between minorities and Whites. The federal task force focused on six problem areas in which minority populations were experiencing excess deaths: cardiovascular and cerebrovascular disease; cancer; homicides and accidents; infant mortality; cirrhosis; and diabetes. The task force discussed causes of the discrepancy and concluded that minorities "have not benefited fully or equitably from the fruits of science or from those systems responsible for translating or using health sciences technology."

The federal report focused on four minority groups: Blacks, Hispanics, Asian and Pacific Islanders, and Native Americans. This report discusses each of these four groups and also examines the situation of Arabs, who constitute a significant ethnic minority population in Michigan.

Reducing the discrepancy in health status between minorities and the non-minority population has become a focal point for public health activity on both state and national levels. Unless considerable progress is made on elevating the health status of those at the bottom, the objective of a "healthy people" set by the public health community will not be reached. The purposes of this report are three-fold: presentation of data detailing the extent of the racial gap in health status in Michigan; investigation of some of the causes of this gap; and identification of steps that can be taken to reduce the gap.

Demographic Features and Health Problems of Minority Groups in Michigan

Minorities are an increasing proportion of Michigan's population.

Minorities are an increasing proportion of Michigan's population. The other than White population was just over one million in 1970 and constituted 11.6 percent of the state's population. In 1980 the other than White population grew to 1.3 million and 14.1 percent of the state total. For 1985 the official estimated other than White population was 1,374,091 or 15.1 percent of the state's population. This estimate does not include all minority groups, however, nor does it take into account the disproportionate undercounting by the census of members of minority groups. These issues are discussed in the sections Undercounting of Minorities and Estimated Minority Population below.

Census criteria for determining who is "other than White" have changed over the years. In the 1980 census, the "other than White" population included Blacks, American Indians, Asian and Pacific Islanders, and "other" races. The census count is based on self-enumeration of the population but the bureau does reallocate some responses. Thus, in 1970, persons responding that their race was Mexican, Cuban, Puerto Rican, or Dominican were included in the "White" category but in 1980 they were included in the "other" race category. On the other hand, persons listing responses such as Lebanese were reclassified as White in 1980. Hispanics, therefore, are included in part in the other than White population in official census publications since nearly half of the respondents reporting Spanish origin listed their race as Black or "other."

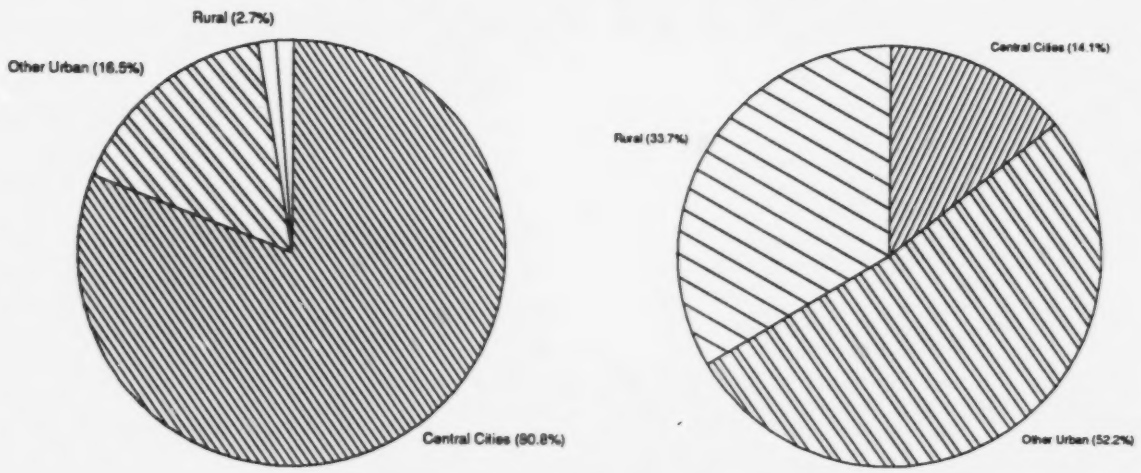
The totals given above are based on a census bureau tape which provides a modified race distribution consistent with the 1970 census and with the racial categories used by state health departments.[1] The most notable change is the transfer of the Spanish origin group from the residual "other" race category to the White group. Note also that Arabs are included in the White population figures.

Blacks

Blacks are the largest minority group in Michigan. In 1985 there were an estimated 1,265,335 Black persons in Michigan, 13.9 percent of the state's population and 92.1 percent of the state's other than White population. While two thirds of Michigan's White population lived in urban areas in 1980, the Black population in Michigan was almost entirely (97.3 percent) an urban population (Figure 1-1). Moreover, 83 percent of urban Blacks lived in central cities com-

FIGURE 1.1

Geographic Distribution of Black and White Populations, Michigan 1980



pared to 22 percent of urban Whites. Sixty three percent of Michigan's Black population resided in Detroit in 1980.[2]

Because they constitute the bulk of the other than White population in Michigan, data on overall health status problems of minorities tend to reflect the Black experience. For all six of the major causes of excess deaths discussed in the federal report, Blacks undergo excess deaths in Michigan. Age-adjusted death rates for Blacks are substantially higher than White rates for diseases of the heart, cancer, cerebrovascular disease, pneumonia and influenza, diabetes, and chronic liver disease and cirrhosis. The infant mortality rate for Blacks is two and one half times the White rate. The age-adjusted homicide rate for Blacks is several times higher than that for Whites.

Blacks also have higher prevalence rates for a number of key risk factors. Hypertension, a risk factor for cardiovascular and cerebrovascular disease, is one and one half times as common in the Black population in Michigan than it is in the White population. The prevalence of cigarette smoking is substantially higher in the Black community than in the White community. Obesity is much more common among Black women than among White women. Poor access to early detection and treatment services for diseases such as cancer appears to be a significant factor in the elevation of mortality rates for Blacks. Inadequate access to prenatal and postnatal care services contributes to the very high rate of infant mortality in the Black community.

Age-adjusted death rates for Blacks are substantially higher than White rates

TABLE 1-1

Federally-Defined Minorities in Michigan by Specified Group, 1980 Actual Census and Sample Count

CENSUS DESIGNATION	ACTUAL COUNT*	ESTIMATE BASED ON SAMPLE**
Black	**1,199,023**	**1,197,177**
Native American	**40,050**	**44,919**
American Indian	39,714	44,712
Eskimo	208	102
Aleut	128	105
Asian/Pacific Islander	**56,790**	**62,641**
Japanese	5,872	6,460
Chinese	11,009	10,824
Filipino	11,166	11,132
Korean	8,714	8,948
Asian Indian	14,690	15,363
Vietnamese	4,209	4,364
Hawaiian	799	894
Guamian	226	199
Samoan	105	90
Other	—	4,367
Spanish Origin	**162,440**	**157,626**
Mexican	112,183	107,766
Puerto Rican	12,425	12,077
Cuban	4,177	3,629
Other Hispanic	33,655	34,154

* U.S. Bureau of the Census, 1980 Census of the Population, Characteristics of the Population, Vol. 1, General Population Characteristics, Chapter B, Part 24, Michigan, Tables 15, 18. PC 80-1-B24. August 1982. Washington, DC.

** U.S. Bureau of the Census, 1980 Census of the Population, Characteristics of the Population, Vol. 1, General Social and Economic Characteristics, Chapter C, Part 24, Michigan, Tables 58, 59. PC 80-1-C24. August 1983. Washington, DC. U.S. Bureau of the Census, 1980 Census of the Population, Asian/Pacific Islander Population by State: 1980, Table 1. Supplementary Report, PC 80-S1-12. December 1983. Washington, DC.

Hispanics

Hispanics are the second largest minority group in Michigan. The 1980 census counted 162,440 Hispanics, 1.8 percent of the state population. Hispanics are a heterogenous group in the United States, originating from more than a dozen Spanish speaking countries. In Michigan, Hispanics of Mexican origin were the largest subgroup, totaling 112,183 persons in 1980 or 69 percent of all Hispanics. There were 12,425 persons originating from Puerto Rico, 4,177 from Cuba, and 33,655 from other Central and South American countries and from Spain.

Vital statistics data on Hispanics are not currently available but a planned revision of the birth and death records should correct this deficiency in 1989. As is the case for other population groups, diseases of the heart and cancer are the leading causes of death. Although the Hispanic overall cancer prevalence rate appears to be lower than the non-Hispanic White rate, rates for gallbladder, stomach, cervical, and renal malignancies are elevated for Hispanics. Hispanics appear to have a greater prevalence of such risk factors as hypertension and obesity than is the case for the White population. Diabetes prevalence also appears to be elevated. Hispanic males are much more likely than non-Hispanic White males to be victims of violence.[3]

Data on infant mortality does not indicate that rates for Hispanics are elevated. However, there is evidence of relatively high rates of teenage pregnancy,[4] delayed or absent prenatal care, high birth order, and high maternal age.[5] It may be that underregistration of deaths is responsible for this discrepancy. Another important child health issue is immunization. The rate of immunization among the migrant population in Michigan, which is largely Hispanic, is low (See Chapter Twelve).

Inadequate access to care is a major problem facing Hispanics.

Inadequate access to care is a major problem facing Hispanics. The Robert Wood Johnson's Special Report on Access to Health Care found that in 1986 twice as many uninsured people as insured people had no regular source of medical care. The report found that 20 percent of Hispanics were uninsured compared with 7.5 percent of the non-Hispanic White population. The Michigan League for Human Services in its 1986 study of the uninsured in Michigan found an uninsured rate for Hispanics of 13.6 percent compared with a rate of 10.5 percent for non-Hispanic Whites. Compounding these financial barriers to care are linguistic and cultural barriers (see Chapter Fourteen).

Asian and Pacific Islanders

There were 56,790 Asian and Pacific Islanders in Michigan in 1980 according to the official full census count. Not all Asian and Pacific Islander groups were listed on the census form, however. After tabulating a sample of the forms, the bureau estimated that the total

Asian and Pacific Islander population was 62,641 (Table 1-1). This population is also very heterogenous, originating in many countries with quite varied cultures and with many different languages. The largest group was the Asian Indians, which totaled 15,363 persons or about one quarter of the estimated Asian and Pacific Islander population. There were 11,132 Filipinos and just under 11,000 Chinese in 1980, so that each group constituted somewhat less than one fifth of the Asian/Pacific Islander population. There were also sizeable groups of Koreans (8,948 persons), Japanese (6,460 persons), and Vietnamese (4,364).[6]

Tuberculosis, although not a major cause of death, is a serious health problem among Asian and Pacific Islander immigrants.

Heart disease and cancer have consistently been the two leading causes of death in the Asian and Pacific Islander population in Michigan as in the non-minority population. Most recently cancer has been the leading cause of death and accounts for about 30 percent of the Asian/Pacific Islander deaths during 1984-86. Deaths due to diseases of the heart make up about one fifth of Asian and Pacific deaths in Michigan. According to the *Report of the Secretary's Task Force on Black and Minority Health*, Asian and Pacific Islanders enjoy lower heart disease and cancer mortality rates than do non-Hispanic Whites. These differences may be due to culturally influenced health-related practices involving diet, smoking, and alcohol consumption. There is evidence, however, that these behavioral and disease patterns change as immigrants adopt United States cultural patterns over time.

In 1984 the infant mortality rate for Michigan Asian and Pacific Islanders was approximately 9.9 per 1000, marginally higher than the White rate. Asian and Pacific Islander teenagers were especially likely to have fewer than five prenatal visits or inadequate care. Asian and Pacific Islanders, in general, were less likely than White mothers to have adequate care. Only 71.5 percent of Asian and Pacific Islanders received adequate care in 1986.

Accidents were responsible for approximately 12 percent of the Asian and Pacific Islander deaths in Michigan in the past three years, about three times the frequency of this cause among Whites. Hospital discharge data also indicate that there may be an elevated prevalence of unintentional injuries among races other than Whites and Blacks (principally Asian and Pacific Islanders and Native Americans) in Michigan. Hospital discharge data also show an elevated rate of "homicide and injury purposely inflicted by other persons" for the other race category.

Tuberculosis, although not a major cause of death, is a serious health problem among Asian and Pacific Islander immigrants. The rate for Asian and Pacific Islanders is more than twenty times the White rate. The Centers for Disease Control estimates that half of these cases are preventable with appropriate screening and treatment.

Native Americans

The 1980 census count showed 40,050 Native American persons in Michigan. Almost all of these (39,714) were American Indians as the Eskimo and Aleut population in the state was quite small. After the sample data was reviewed, the bureau estimated the total Native American population to be 44,919.[7] Heterogeneity is also an important feature of the Native American population just as it is of the Hispanic and Asian/Pacific Islander groups. There are over 400 Indian tribes in the United States. In Michigan, there are three major tribal groups--Ojibwa (Chippewa), Odawa (Ottawa), and Potawatomi. There are six federally recognized reservations in Michigan serving about 10,000 people.[8] The majority of Michigan Indians, however, live in urban areas, with one third of the total in the Detroit metropolitan area.[9]

The percentage of total deaths from accidents, chronic liver disease and cirrhosis, suicide and diabetes were higher among Native Americans in Michigan (1984-1986) than for all Michiganders in 1985. The first three causes of death may be directly or indirectly related to alcohol abuse, which *Michigan Indian Health: Report of the Director's Indian Health Task Force* (1985)[10] concluded is one of the most critical health problems among American Indians. The Indian Health Service estimates that nationally, approximately 80 percent of suicides, and 75 percent of all deaths in the Native American population are alcohol-related.[11] The Chippewa Health Study revealed, furthermore, that yellow jaundice, a symptom of decreased liver function, was reported by 25 percent of the Chippewa males age 45-64. Forty-one percent of males age 18-44 and 55 percent of males aged 45-64 had some form of liver disfunction.[12]

Many agencies wrongly assume that all Indians receive health care from the Indian Health Service and fail to provide them needed services.

Nationally, the diabetes-related mortality rate for Native Americans was 2.3 times higher than that for the general population in 1984.[13] The Chippewa Health Study also revealed a high prevalence of diabetes for this Michigan tribe. For females, 27 and 36 percent of those 45-64 and 65-80 years old, respectively, reported having been told by a physician that they had diabetes. One-quarter of the women and one-third of the men in the 45-64 age group had undetected diabetes.

Access to care is also a significant problem for Native Americans. The *Report of the Director's Indian Health Task Force* noted that many agencies wrongly assume that all Indians receive health care from the Indian Health Service and fail to provide them needed services. Only a minority of Michigan Indians actually receive care from Indian Health Service facilities. The Michigan League for Human Services survey found that minorities other than Black and Hispanic had the highest uninsured rate of any population sub-group (18.6 percent compared with 10.5 percent for non-Hispanic Whites.)

Arabs

Arab Americans trace their origin to several Middle Eastern countries. There was a total of 69,610 persons in Michigan tracing their ancestry to Arab countries according to 1980 census data (Table 1-2). Over 40 percent (30,456) identified themselves as Lebanese but there were also large numbers identifying themselves as Arabians (11,337), Assyrians (8,088), Syrians (7,450), and Iraqis (5,257). Three quarters of Michigan Arabs reside in the Detroit area.[14] Scholars of the Detroit Arab community see four major sub-populations: Lebanese, Palestinian/Jordanian, Yemenis, and Iraqi/Chaldeans. The Arab population, which has grown rapidly in the past two decades due to immigration, is diverse in religion as well as national origin, including a variety of Christian and Muslim groups. Although most Arabs do not live in communities where they constitute the majority, there are a few areas which are densely populated by Arab Americans. Most notable is the south end of Dearborn, which is home to several thousand Arabs and serves as an immigrant reception area.[15]

Health problems faced by Arab Americans in Michigan are those of any urban minority population whose socio-economic situation is complicated by cultural and language barriers.[16] Although data is scarce on several of the minority groups within Michigan, it perhaps is more sparse for Arab Americans than for any other minority group. Several recent studies have focused on prenatal and postnatal health care needs of Arab American females in the Detroit area. A recent parenting survey found that Arab American women marry at a young age and begin child-bearing early.[17] Seventy five percent of the respondents were married by 19 years of age. Another teen parenting study found that arranged marriages at an early age were a major concern for most Arab American women in the study.[18] Frequent pregnancies are also common in the Arab American community and may be associated with health problems. A recent study by the Wayne County Health Department found an estimated infant mortality rate of 38.5 per 1000 in the Dearborn Arab community.[19]

Problems with access to care is a major concern of Arab Americans as of other minority groups. Financial barriers are a significant problem of access for a community with substantial poverty and unemployment, such as the Dearborn Arab community. In addition, language and cultural factors are major barriers to health care access. Many Arabic speaking clients need culturally specific materials that do not depend on Arabic or other language reading ability. Bilingual and culturally aware health professionals are particularly needed in a community with a large and continuing influx of immigrants.[20]

TABLE 1-2

Number of Persons Reporting Arab Ancestry by Country of Origin, Michigan Residents, 1980.

National Origin	Population
Arabian	11,337
Lebanese	30,456
Assyrian	8,088
Syrian	7,450
Iraqi	5,257
Egyptian	1,308
Jordanian	1,177
Moroccan	102
Palestinian	2,100
Saudi Arabian	392
Other North African	1,943
Total	69,610

Source: Bureau of the Census, 1980 Census of the Population, Ancestry of the Population by State: 1980, Table 3. Supplementary Report. PC 80-S1-10. April 1983. Washington, DC.

Many Arabic speaking clients need culturally specific materials that do not depend on Arabic or other language reading ability.

Undercounting of Minorities

Undercounting of minority populations has been a concern to members of these groups and to officials of jurisdictions with substantial minority populations. There are significant revenue implications in the failure to count all citizens. The Census Bureau has acknowledged the existence of undercounting. The number of Black persons not counted in 1980, according to the census estimate, was 5.9 percent of the estimated Black population, compared with 0.9 percent of the estimated White population.[21] In 1985, the bureau published revised weighting procedures for the Hispanic population that resulted in a 1.6 million (10.8 percent) increase in the national Hispanic population estimate for 1984.[22] The bureau noted that this revised estimate includes some, but not all, undocumented immigrants. Although it has developed national estimates of the number of undercounted persons, the bureau has not been able to make reliable estimates of the undercount for specific geographical areas.

The U.S. Census estimate of the number of Native Americans living in Michigan is considerably lower than estimates of state and local agencies

The U.S. Census estimate of the number of Native Americans living in Michigan is considerably lower than estimates of state and local agencies. The Michigan Department of Public Health's report, *Meeting the Health Needs of American Indians in Michigan* estimated that there were 50,000 American Indians in Michigan in 1975 based on a school census. This figure is 26 percent higher than the U.S. 1980 figure of 39,714. The Chippewa Health Study: Final Report (1978) provided a careful estimate of the number of Native Americans living in the Upper Peninsula. In this study, individuals were counted as Native Americans if they considered themselves to be such and if they were considered as such by the community. Those who could trace their ancestry to the 1906 census of Chippewa were automatically included as Native Americans. This study estimated an Indian population of 9,335 in the Upper Peninsula which is 456 percent higher than the U.S. census estimate of 1,678. The Michigan Commission on Indian Affairs in 1982 projected from the results of the Michigan Department of Education's "Fourth Friday Count" and estimated the Indian population in Michigan at 61,714.

Questions have been raised about the accuracy of the census estimate of the number of Arab Americans in Michigan. Arab American community leaders estimate that there are 200,000 to 250,000 persons of Middle East ancestry in the Detroit area. Adjusting for non-response, non-specified responses, natural increase, and immigration since 1980, Paine constructed a revised estimate of the Arab population of the Detroit area for 1985 of 78,000 instead of the Census figure of 53,800.[23] Data on school attendance presented by Paine seem to indicate that the undercount is even more substantial. Moreover, the census estimated that 2,100 Palestinians currently live in Detroit, yet the membership of one Palestinian club alone, the American Federation of Ramallah Palestine, numbers about 2,400 registered Palestinians in Detroit.[24] The counts of Arabs entering the United States often is greater than the number of Arabs counted by

the U.S. census. For political or religious reasons, a number of groups may be reluctant to self-identify for purposes of the census.[25]

Estimated Minority Population

Taking into account the evidence of undercounting of minorities, the estimated number of minority persons in Michigan in 1985 is about one and three quarter million or 19.35 percent of the total state population (Table 1-3). To maintain consistency, however, rates presented in this report are based solely on official census population figures.

TABLE 1-3

Estimated Minority Population in Michigan, 1985

RACE/ETHNICITY	NUMBER	PERCENTAGE
Blacks	1,344,477	14.79%
Hispanic	184,592	2.03%
Arab	100,182	1.18%
Asian and Pacific Islander	76,141	0.84%
Native American	62,927	0.69%
Minority Population	1,758,220*	19.35%

*Note. Total is reduced by 10,099 to avoid double counting the Black Hispanic population.

Age Distribution

The population of minority groups in Michigan is generally younger than the non-minority population. The median age of the White population in 1980 was 29.6 compared with 24.9 for Blacks, 22.4 for American Indians, and 21.3 for Hispanics. The median age for Asian and Pacific Islanders varied from a low of 19.9 for Vietnamese to a high of 31.0 for Japanese.[26]

TABLE 1-4

Number and Percentage of Persons At or Below Poverty Level, By Detailed Race/Ethnicity, Michigan, 1979

RACE/ETHNICITY	NUMBER AT/ BELOW POVERTY	PERCENT OF GROUP AT/ BELOW POVERTY
White	614,025	7.9
Black	300,639	25.8
Native American	9,653	22.1
Asian/Pacific	7,851	12.9
Spanish Origin	36,306	23.5

Source: U.S. Bureau of the Census, 1980 Census of the Population, Characteristics of the Population, Vol. 1, General Social and Economic Characteristics, Chap. C, Part 24.

Poverty and Unemployment

Members of minority groups generally have lower incomes and are much more likely to be poor than are non-minority persons. According to the 1980 census, 25.8 percent of Blacks in Michigan had incomes below the poverty level in 1979 (Table 1-4). The proportion of persons below the poverty level was almost as great for Hispanics (23.5 percent) and Native Americans (22.1 percent). The comparable figure for Asian and Pacific Islanders was 12.9 percent while that for the White population was 7.9 percent.[27] National data indicate that the proportion of the population in poverty has been rising in the 1980's, particularly for Hispanics.[28]

TABLE 1-5

Number and Percentage of Persons Unemployed, By Detailed Race/Ethnicity, Michigan, 1980.

RACE/ETHNICITY	NUMBER UNEMPLOYED	PERCENT UNEMPLOYED
White	492,291	9.5
Black	98,179	21.5
Native American	4,180	21.5
Asian/Pacific	2,511	7.6
Spanish Origin	13,251	17.4

Source: U.S. Bureau of the Census, 1980 Census of the Population, Characteristics of the Population, Vol. 1, General

Other economic indicators also show that minority groups generally face more insecurity than the non-minority population. The unemployment rate for Blacks and American Indians in Michigan in 1980 (21.5 percent for both groups) was more than twice as high as the White rate of 9.5 percent (Table 1-5). The rate for Hispanics (17.4 percent) was nearly twice the White rate while that for Asian and Pacific Islanders (7.6 percent) was below the White rate.

The discrepancy between the economic status of minorities and Whites has been growing rather than diminishing in recent years in Michigan. The unemployment rate for Whites dropped to 7.6 percent in 1985 but increased to 27.8 percent for Blacks. This nearly four-to-one difference in unemployment rates, moreover, does not fully reflect the discrepancy in the employment situation. The labor force participation rate for

TABLE 1-6

Number and Percentage of Families with Female Head by Detailed Race or Ethnic Group*, Michigan, 1980.

RACE/ ETHNICITY	TOTAL NUMBER OF FAMILIES	FAMILIES WITH FEMALE HOUSEHOLDER, NO HUSBAND PRESENT	PERCENT
White	2,074,765	239,171	11.5%
Black	277,202	115,020	41.5%
Hispanic**	34,313	6,851	20.0%
Native American	8,819	2,201	25.0%
Asian/Pacific	11,845	1,032	8.7%
Total	2,392,504	361,180	15.1%

TABLE 1-7

Number and Percentage* of Female-Headed Families in Poverty by Detailed Race or Ethnic Group**, Michigan, 1980.

RACE/ETHNICITY	NUMBER IN POVERTY	PERCENTAGE IN POVERTY
White	55,125	23.8%
Black	50,052	43.9%
Hispanic#	3,088	46.5%
Native American	1,169	46.6%
Asian/Pacific	301	27.9%
Total	108,095	30.7%

* Percentage computation based on sample data, not full count data shown in previous table.
** Other races not shown
# Hispanics can be of any race

TABLE 1-8

Expected, Observed, and Excess Other than White Deaths for Selected Causes of Death, Michigan Residents, 1985.*

	EXPECTED DEATHS	OBSERVED DEATHS	EXCESS DEATHS
Diseases of the Heart	2,922	3,580	658
Homicide	59	712	653
Malignant Neoplasm	1,816	2,289	473
Infant Deaths from all causes	232	521	289
Chronic Liver Disease and Cirrhosis	120	329	209
Cerebrovascular disease	501	707	206
Diabetes Mellitus	132	223	91
Accidents and Adverse Effects	425	457	32

* Computed by applying the age and sex specific rates for whites to the other than white population in these age/sex groups and comparing the resulting expected number of deaths with that observed for other than white population.

other than White males has dropped 19 percent since 1970 compared to a 5.6 percent decrease for White males.[29]

Female Headed Families

Minority group families were much more likely than White families to be headed by a woman. More than two in five Black families were headed by women in 1980 as were one in four Native American families and one in five Hispanic families (Table 1-6). The proportion of White families headed by women was 11.5 percent and that for Asian/Pacific families was 8.7 percent. Nearly half of the Black, Native American, and Hispanic families headed by women had incomes below the poverty level (Table 1-7).

Excess Deaths in Michigan

Michigan age-adjusted death rates in 1985 were higher for minorities than for Whites for the four leading causes of death and for seven of the ten leading causes. Rates for minorities were 27 percent higher for both diseases of the heart and for cancer, the two leading causes of death. Overall, the age-adjusted death rate was 48 percent higher for minorities than for Whites. Rates for minorities were higher than those for Whites in all age groups below age 85 and were two to three times higher for those between ages 15 and 45 years.

If there were no disparity in age-specific death rates, there would have been 3,241 fewer minority deaths in 1985 (a total of 7908 deaths instead of the actual total of 11,149). For deaths under age 45, there were 1,589 excess deaths, 59 percent of the total of 2,683 deaths. The other than White population in Michigan experienced excess deaths in each of the six major problem areas discussed in the federal report. There were 653 excess homicide deaths, 658 excess heart disease deaths, 473 excess cancer deaths, and 289 excess infant deaths (Table 1-8). There were over 200 excess deaths for chronic liver disease and cirrhosis and for cerebrovascular disease. There were 91 excess diabetes deaths and 32 excess accident deaths. The greatest relative discrepancies between expected deaths and observed deaths were for homicide, cirrhosis, infant mortality, and diabetes.

Years of Potential Life Lost

Another mortality measure which highlights the racial discrepancy in health status is the years of potential life lost (YPLL). This statistic sums the number of years of life lost as a result of deaths of individuals prior to age 65 and thus emphasizes deaths of younger persons. For all major causes of death except suicide, the years of potential life lost rate was greater for the Black population than for the White population (Table 1-9). Although the Black population is much smaller than the White population, the absolute number of

years of potential life lost due to homicide was substantially greater for Blacks than for Whites (23,486 and 10,814, respectively). The *rate* of years of potential life lost due to homicide was more than twelve times greater for Blacks than for Whites. The YPLL rate for cirrhosis was 4.5 times greater for Blacks than for Whites while that for prematurity was 3.4 times greater than the comparable White rate.

TABLE 1-9

Number and Rate of Years of Potential Life Lost (YPLL*) by Race and Black/White Risk Ratio, Michigan Residents, 1985.

CAUSE	WHITES NUMBER	WHITES RATE	BLACKS NUMBER	BLACKS RATE	RISK RATIO
Homicides	10,814	1.6	23,486	20.0	12.5
Cirrhosis/Chronic Liver Disease	6,817	1.0	5,235	4.5	4.5
Prematurity	13,352	1.9	7,475	6.4	3.4
Cerebrovascular Disease	6,748	1.0	3,352	2.9	2.9
Pneumonia & Influenza	3,457	0.5	1,666	1.4	2.8
SIDS	10,463	1.5	4,744	4.0	2.7
Diabetes	3,254	0.5	1,145	1.0	2.0
Chronic Obstructive Pulmonary Disease	3,915	0.6	1,240	1.1	1.8
Diseases of the Heart	50,568	7.4	14,604	12.4	1.7
Congenital Anomalies	20,748	3.0	4,703	4.0	1.3
Unintentional Injuries	67,028	9.8	13,338	11.4	1.2
Cancer	61,079	8.9	11,198	9.5	1.1
Suicide	22,267	3.2	3,281	2.8	0.9

* YPLL before age 65 per 1000 persons less than 65 years

A Growing Discrepancy

The wide discrepancy between minority and White mortality rates appears to be growing. For a number of causes of death, minorities have been experiencing increases in mortality rates in recent years. The overall age-adjusted death rate for all causes of death for the other than White population was higher in 1985 than in any year since 1976. Ten years ago the Michigan other than White mortality rate was only slightly higher than the comparable national figure. However, by 1985 the Michigan rate was 18 percent higher than the national rate. The other than White death rates for diseases of the heart, cancer, and homicide are all rising for Michigan minorities. The rates for diabetes, accidents, cirrhosis, and infant mortality are stagnating at best. For heart disease, cancer, cirrhosis, homicide, and infant mortality, Michigan's other than White rates compare unfavorably with those for the nation. The worsening economic situation of minorities in Michigan appears to have led to a general deterioration in their health status.

The severity of health problems experienced by minorities in Michigan calls for special attention. A concentrated effort designed to reduce risk factors and improve access to care among minority populations will help to reduce the widening gap in health status which has serious consequences for the state as a whole.

Notes

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Section II

MAJOR CAUSES OF EXCESS MINORITY DEATHS

Chapter Two

CARDIOVASCULAR AND CEREBROVASCULAR DISEASES

In this country, cardiovascular and cerebrovascular diseases lead to more deaths, disability and economic loss than any other group of illnesses. Diseases of the heart were the leading cause of death in 1985 both nationally and in Michigan. However, the Michigan age-adjusted death rate for heart disease was substantially higher (208.4 per 100,000 population) than the national rate of 181.7 per 100,000.

Among the leading causes of death, cerebrovascular diseases ranked third highest in 1985. The national rate was 32.3 per 100,000 population and the Michigan rate was higher at 35.0 per 100,000 population.[1]

For Michigan's "other than White" population, the age-adjusted death rate for diseases of the heart was 27 percent higher than for the White population in 1985 (255.6 per 100,000 population vs. 201.7).[2] The age-adjusted cerebrovascular death rate for this population (51.2 per 100,000) was 57 percent greater than the rate for Whites which was 32.7 per 100,000. Both nationally and in Michigan, these elevated other than White rates reflect high mortality rates for Blacks.

Non-Black minorities generally had lower cardiovascular and cerebrovascular mortality rates than Whites (See Table 2-1). For example, the heart disease mortality rate for Native American males nationally was 54 percent lower than that for White males. The Black male rate, however, was 16 times higher than the White male rate.[3] In Michigan in 1980, as shown in Table 2-1, the heart disease mortality rates for Black males and females were 10 and 33 percent

TABLE 2-1

Age-Adjusted Death Rates for Selected Causes, by Sex and Race, Michigan Residents, 1980.

RACE /SEX	HEART DISEASE	ISCHEMIC HEART DISEASE	CEREBRO-VASCULAR DISEASE
White Male	299.1	236.5	44.2
White Female	156.0	116.7	38.6
Black Male	329.4	168.8	66.3
Black Female	208.2	115.7	58.4
Native American Male	236.3	159.2	81.5
Native American Female	74.5	64.6	35.1
Asian/Pacific Male	129.3	94.2	22.6
Asian/Pacific Female	34.2	20.1	29.3

Given as rates per 100,000 population (age-adjusted to U.S. 1940 standard population).

The Black adult hypertension prevalence rate of 34.9 percent was 1.5 times higher than the White rate.

higher, respectively, than those of their White counterparts. (The lower Black rates for ischemic heart disease are discussed below in the heart disease section). On the other hand, the heart disease mortality rates for the Native American and Asian males were 21 and 57 percent **lower**, respectively, than those for the White males. This pattern was even more pronounced among the females. The rates for cerebrovascular disease were likewise lowest for the Asians and highest for Blacks. Interestingly, the cerebrovascular mortality rate for Native American males is 84 percent higher than that for White males. This finding is discussed more fully in the section on cerebrovascular disease.

Understanding the causes and exploring the possibilities for the prevention of such diseases among minority populations can help efforts to improve the health and productivity of these groups.

Contributing Factors for Cardiovascular and Cerebrovascular Disease

Hypertension

Blacks and hypertension

Hypertension, or elevated blood pressure, is an important risk factor for cardiovascular and cerebrovascular disease. Blacks have a much greater prevalence rate of hypertension than do Whites.[4] In a recent national study of adults[5], ages 18-74, it was found that the prevalence of hypertension among Blacks was 1.4 times that among Whites.[6] The racial discrepancy in blood pressure was especially high among men and women age 35-74 years and among women of all ages. Black males were 30 percent more likely to be hypertensive than were White males, while Black women were 90 percent more likely to be hypertensive than were their White counterparts.

The 1983-84 Michigan Blood Pressure Survey[7] produced similar findings. The Black adult hypertension prevalence rate of 34.9 percent was 1.5 times higher than the White rate of 22.7 percent.[8] The large sex differences found nationally were not found in the Michigan study, however. Specifically, the prevalence of hypertension was 40 percent greater among Black males than among White males and 50 percent greater among Black females than among White females.

Among the factors that have been suggested as contributing to the higher prevalence of hypertension among Blacks are low income and impaired social ties,[9] the stressfulness of prejudice,[10] a lower

ratio of potassium to sodium levels in the blood,[11] and the greater prevalence of obesity.[12]

Non-Black minorities and hypertension

While information on the morbidity associated with hypertension is sparse for non-Black minorities, evidence indicates that this condition is important for these groups. For example, a study of Mexican-American adolescents in Corpus Christi, Texas reveals that these children had significantly higher mean systolic blood pressures than did the White adolescents. This difference existed for both the males and the females.[13] A study of Mexican-American adults in Laredo, Texas, found that the prevalence of hypertension among Mexican-Americans under age 60 was slightly higher than that among Whites, but lower than that for Blacks. For those age 60 and older, the prevalence rate was substantially higher than the White rate and about the same as that for Blacks.[14]

In the California Hypertension Survey, Japanese men under age fifty were 28 percent more likely to have elevated blood pressure than were Whites of similar age (19.2 vs. 15.0 percent). It was found, however, that Japanese women under age 50 were 92 percent less likely to be hypertensive than White women of the same age (.4 vs. 4.8 percent). In addition, Japanese women age 50 and above were 62 percent less likely to be hypertensive (13.9 vs. 36.4 percent) than their White counterparts. The elevated rate for the Japanese males appeared to be due to excess weight, smoking and alcohol consumption.[15]

The prevalence of hypertension that was related to obesity and diabetes . . . was higher for Native Americans than for Whites.

A Minneapolis study of Native Americans found that the prevalence of hypertension among this group is similar to that among Whites. The prevalence of hypertension that was related to obesity and diabetes, however, was higher for Native Americans than for Whites.[16] A study of Navajo Indians suggested, furthermore, that the average blood pressure of the young men in 1977 was higher than for their counterparts in 1956-62. The authors suggested that this increase may be the result of cultural changes such as increased alcohol use.[17] *The Chippewa Health Study: Final Report* (1978) shows that of Michigan Chippewa studied, approximately one-fifth of those age 18-44 had high blood pressure. Over two-thirds of those 45 and older were hypertensive. These rates were somewhat higher than those for the U.S. population.

Effective methods for the treatment and control of hypertension are available and have been shown to reduce cardiovascular disease mortality. Increasing awarness and control of hypertension in high risk minority populations is an important public health priority.

Hypertension awareness

Since the 1960's, awareness of blood pressure status has increased and much progress has been made in treatment and control of hypertension.[18] In the 1980's however, there appears to have been backward movement in blood pressure control among Black women in Michigan. The proportion of Black female hypertensives

TABLE 2-2

Percent Hypertensives Under Treatment/Control by Race and Sex, Michigan, 1980/1983-84

	BLACK MALES	WHITE MALES	BLACK FEMALES	WHITE FEMALES
1980 Treated	45	37	68	64
1980 Control	3	15	44	33
1983-84 Treated	41	44	75	64
1983-84 Control	14	18	28	36

Source: *Coordination of High Blood Pressure Control in Michigan: Final Report, 1979-1984*, pp. 245-246. Lansing: Michigan Department of Public Health, April 1985.

under control declined from 44 percent to 28 percent between 1980 and 1983-84.[19] Black male hypertensives were more likely to have controlled hypertension in 1983-84 than in 1980. It should be noted, however, that the percent of Black male hypertensives under control continued to be extremely low (3 percent in 1980 compared with 14 percent in 1983-84). In the same period, there were marginal improvements in blood pressure treatment and control status among Whites (See Table 2-2).[20]

Atherosclerosis, Obesity, and Exercise

Atherosclerosis, a build up of fatty tissue in the vascular system, has been found to relate to high blood pressure and cardiovascular and cerebrovascular disease. Atherosclerosis, in turn, has been found to be positively related to levels of plasma low-density lipoprotein (LDL) and inversely related to levels of high-density lipoprotein (HDL). Foods that are high in fats, particularly saturated fats and cholesterol, may possibly result in an increase in LDL and atherosclerotic build-up. Some oils that are high in HDL have been found possibly to reduce atherosclerosis.[21] Obesity, the accumulation of excess body fat, increases the risk of high serum cholesterol and hypertension.[22] Vigorous physical activity decreases the risk of coronary heart disease and may decrease hypertension as well.[23] Exercise is also important in weight control.[24] (See Chapter Eight for a further discussion).

There is some indication that Blacks have more of the protective HDL and less of the harmful LDL than do Whites.[25] However, a national study reveals that Blacks, both above and below the poverty level, consume a higher percentage of cholesterol per calories than do Whites.[26] Furthermore, national data show elevated serum cholesterol levels to be somewhat more common among Black than White men.[27] (This topic is discussed below more fully in the section on heart disease.) Obesity is also more prevalent among Blacks than among Whites. A 1976-80 National Health and Nutrition Examination Survey (NHANES II) found that 49.5 percent of Black women age 25-74 were overweight compared to 27.5 percent of White women of the same age. Also, 30.9 percent of Black men were overweight as compared to 26.7 percent of White men.[28]

The traditional diets of American Indians, Hispanics and Asians are typically lower in fat content than is the standard Western diet. For example, many Asian meals feature rice or rice noodles as a staple, with more vegetables, fish and shellfish, and smaller amounts of meat than in the typical U.S. diet. Such diets have been found to relate to lower levels of cholesterol and obesity.

A 1977 National Health Interview Survey (NHIS) shows the average serum cholesterol level for Japanese men living in Hawaii to be 15 percent lower than the average for other males

(218.55 mg% vs. 233.96 mg%).[29] Native Americans were also shown in several studies to have lower cholesterol levels than Whites.[30] Furthermore, the NHIS shows that the percentage of Asian and Pacific Islanders age 20 and older who were obese (12.7 percent)[31] was lower than the similar figure for Whites and Blacks (30 percent and 45 percent, respectively).[32]

There is evidence that as these minority groups adapt to the American diet they increase their consumption of animal protein and fat and decrease consumption of complex carbohydrates, fiber, fish and seafood. Japanese men who have undergone these changes were more often overweight and had higher rates of ischemic heart disease than Japanese men who have remained in Japan.[33] Similarly, in a 1979-1982 clinical study of Mexican Americans in San Antonio, Texas, Mexican men of higher socioeconomic status had higher total and low density lipoprotein levels than did those of lower status. The authors conclude that the upper class Mexicans had adapted "Western" eating habits, while the lower class Mexicans had maintained traditional ones.[34] In the *Chippewa Health Study: Final Report* (1978) about one-half of the Native Americans in the 45-64 age group had high serum cholesterol levels. A high prevalence of obesity, 21 percent, was also found among this age group. Similar results have been found nationally.

Cigarette Smoking

Cigarette smoking is a major cause of coronary heart disease in the United States.[35] Furthermore, smoking has been found to have a synergistic effect with other heart disease risk factors.[36] Blacks are more likely to smoke than Whites but are less likely to be heavy smokers. Therefore, it is not clear if Blacks smoke more than Whites in terms of total per capita consumption. This is important since studies among Blacks and Whites have shown cigarette smoking to be predictive of incidence of and mortality from ischemic heart disease.[37] Furthermore, studies have also shown a synergistic effect of cigarette smoking and high blood pressure upon ischemic heart disease.[38] Given that Blacks are more likely to have high blood pressure than Whites and perhaps to smoke more, one would expect Blacks to suffer greater rates of heart disease.

The prevalence of smoking among Asian and Pacific Islander males in a national study appears to be somewhat lower than that for Whites and substantially lower among females.[39] The 1977 NHIS revealed that the prevalence of smoking among Hispanics is also lower, with 54.1 percent of Hispanic having never smoked compared to 43.1 percent of Whites.[40]

Blacks are more likely to have high blood pressure than Whites and perhaps to smoke more, one would expect Blacks to suffer greater rates of heart disease.

TABLE 2-3

Age-adjusted Heart Disease Death Rates by Race and Sex, Michigan and United States Residents, 1985.

	WHITE		OTHER THAN WHITE		RATIO	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Mich.	279.9	141.0	330.1	196.4	1.2	1.4
United States	244.5	121.7	268.4	165.8	1.1	1.4

Based on age-specific death rates per 100,000 population in specific group. Computed by the direct method using as the standard population the age distribution of the total population of the United States as enumerated in 1940.

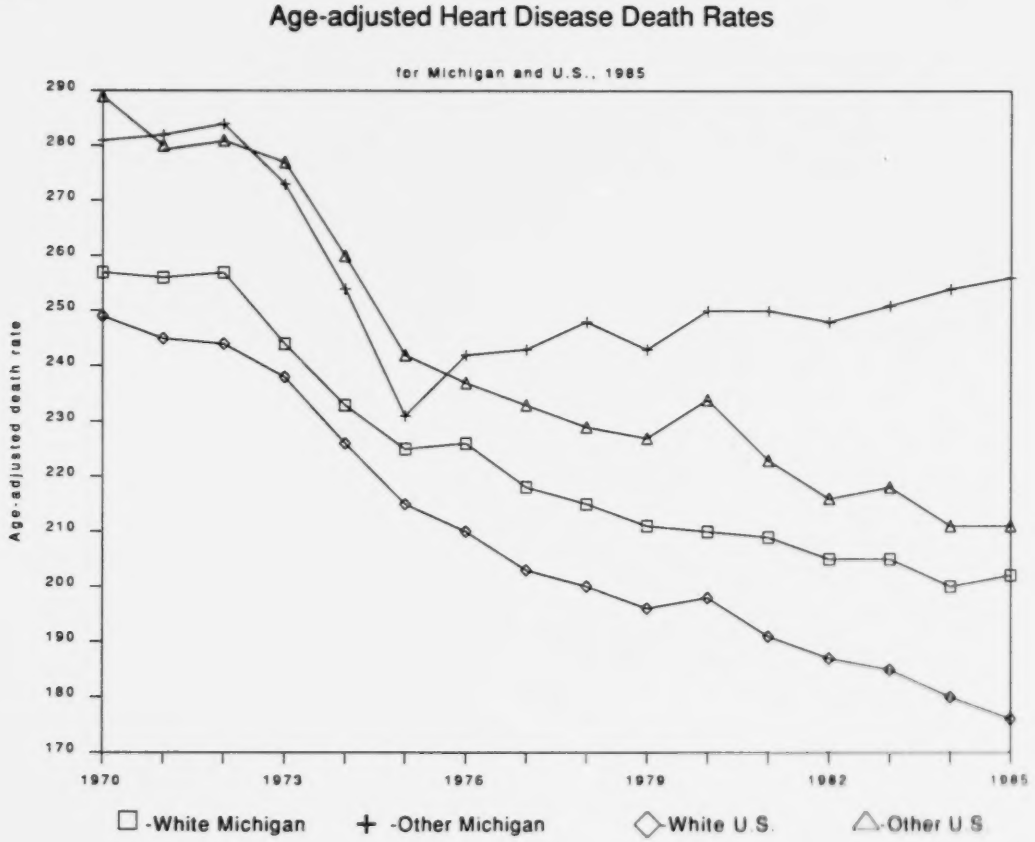
From Michigan Department of Public Health. *Michigan Health Statistics, 1985.* Table 2.11.

Heart Disease

As was noted in the introduction, minorities suffer significantly more deaths from heart disease than do Whites. This disparity was more pronounced for minority females. Michigan's other than White females suffered 39 percent more deaths from heart disease in 1985 than did their White counterparts. Other than White males in the state suffered 18 percent more deaths than did White males. The comparable national ratios for 1984 were 35 percent more deaths for minority females and 8 percent more deaths for minority males, indicating a somewhat greater disparity in Michigan than in the United States (See Table 2-3).

More significantly, the rates (Figure 2-1) for other than White persons in Michigan have been increasing since 1980 while these rates have been declining for White Michiganders and for all persons, including those who are other than White, nationally. Furthermore, in 1984, the heart disease mortality rate of 254.0 for other than White Michiganders was 20 percent higher than the comparable national rate of 211.2. In contrast, the Michigan White rate was only 11 percent higher than the national rate.

FIGURE 2-1



Ischemic heart disease[41]—a lack of oxygen to the heart—accounted for 72 percent of the 1985 Michigan deaths from heart disease. While ischemic heart disease is the leading cause of death among both Blacks and Whites, it is not clear if Blacks suffer either higher mortality or incidence rates from this disease. In 1980, the national age-adjusted mortality rate from ischemic heart disease for Black males was 196.0, slightly *lower* than the rate of 218.0 for White males. The pattern was reversed for females, with the rate for Blacks nearly 20 percent higher than the White rate (116.1 vs. 97.4).[42] Similar results were found in regard to years of potential life lost (YPLL) from ischemic heart disease—the fourth leading cause of YPLL. The crude 1983 YPLL rates were similar for Black and White males (651 and 691 per 100,000, respectively) and higher for Black than White females (315 vs. 180 per 100,000 population, respectively).[43]

Michigan data reveal similar results with the 1985 age-adjusted mortality rate from ischemic heart disease lower for "other than White" males than it was for White males (164.5 vs. 212.6 per 100,000 population) and the reverse pattern for females (104.7 vs. 99.7 per 100,000 population).[44]

These apparent racial differences in ischemic heart disease rates may be due to the way in which physicians identify the cause of death from heart disease on the death certificate, rather than to an actual difference in type of death.[45] A study of physicians' use of death certificate codes indicates that deaths which occurred outside of a hospital were more likely to be coded as hypertensive heart disease or general cardiovascular disease than as ischemic heart disease. The authors suggest that since the latter two codes are more general, they are preferred in unwitnessed deaths or deaths with poorly documented health histories. Since Blacks have poorer access to health care than do Whites, they may be less likely to be under a physician's care for heart problems. Consequently, physicians may be more likely to categorize Blacks in the more general heart codes than in the more specific ischemic heart disease category.

The apparent racial differences in ischemic heart disease rates may be due to the way in which physicians identify the cause of death from heart disease on the death certificate.

Indeed, Blacks in 1980 had far higher mortality rates nationally than Whites for hypertensive heart disease (males 21.8 vs. 5.0; females 17.5 vs. 4.1) and for "other forms of heart disease" (males 102.3 vs. 49.1; females 60.5 vs. 27.9).[46] An examination of 1985 Michigan data reveals similar findings with "other than Whites" more likely than Whites to die from hypertensive heart disease (males: 19.1 vs. 4.5; females: 15.7 vs. 4.1) and from general cardiovascular disease with no mention of hypertension (males 83.6 vs. 29.7; females 42.9 vs. 14.0).[47]

Given that many Blacks do die from ischemic heart disease and that the lower Black mortality rate for these forms of heart disease may be an artifact of physician coding, ischemic heart disease should not be disregarded as an important health problem for Blacks. Consequently, minorities should be encouraged to take the same steps as Whites to prevent it.

Heart disease and non-Black minorities

The heart disease incidence and mortality rates discussed above essentially reflect the experience of the Black population. Age-adjusted rates for diseases of the heart and ischemic heart disease were generally lower for Asian and Pacific Islanders than for Whites in Michigan in 1980 (See Table 2-1). A similar pattern was observed in national rates. Age-adjusted rates for diseases of the heart and ischemic heart disease did not appear to be elevated for Michigan Indians nor for American Indians nationally.[48]

It should be kept in mind that rates for Asian and Pacific Islanders and American Indians may be understated. A study matching 1960 census and death record information found significant discrepancies in the reporting of race on the two records. For the North Central Region in which Michigan is located, 22.9 percent of those classified as other than White or Black by the census were listed as White on the death certificate while 8.2 percent of those listed as other than White or Black on the death certificate were counted as White by the census. The study concluded, "Observed death rates for the Indians, Chinese, and Filipinos were much lower than death rates would have been if only census information had been used."[49]

Although cardiovascular mortality rates for non-Black minority groups must be viewed with caution, there does not appear to be a pattern of excess deaths for these causes.

Mortality data from Southern Texas show that the percentage of deaths from heart disease for Mexican Americans in all age groups over 14 years are similar to or lower than the comparable rates for Whites.[50] In a national 1979-1981 study of first generation Hispanics, Rosenwaike reports that the age-adjusted death rates from heart disease for Cuban, Mexican and Puerto Rican-born Hispanics were lower than the comparable rates for Whites and Blacks (Cubans: 252.8, Mexicans: 272.4, Puerto Ricans: 338.8, vs. Whites: 353.3, Blacks: 400.2 per 100,000 population).[51]

Although cardiovascular mortality rates for non-Black minority groups must be viewed with caution, there does not appear to be a pattern of excess deaths for these causes.

Cerebrovascular Disease

Cerebrovascular disease or stroke is the third leading cause of death in the United States. The age-adjusted cerebrovascular disease mortality rate nationally in 1984 was 17 percent higher among men than women (36.4 vs 31.1 per 100,000, respectively) and 64 percent higher among "other than Whites" than Whites (51.1 vs 31.1 per 100,000). This racial discrepancy was similar for males and females.

In the 1970's, Michigan cerebrovascular mortality rates for "other than Whites" were lower than comparable national rates (see Figure

2-2). Since 1980, however, the Michigan and U.S. rates have become similar. This convergence in rates is due to a greater rate in improvement for "other than Whites" nationally than in Michigan during the late 1970's and 1980's. While the mortality rate from stroke for other than White Michiganders has not increased in the 1980's as has their rate for diseases of the heart, Michigan's other than White population has failed to experience the improvements in rate noted for the other than White population nationally.

According to the Centers for Disease Control, the years of potential life lost (YPLL) due to cerebrovascular disease is higher among Blacks than Whites. While only 12 percent of the national population is Black, Blacks account for 28 percent of YPLL due to cerebrovascular disease (Table 2-4). Furthermore, the rate of YPLL due to cerebrovascular disease was 2.6 times higher among Blacks than Whites. This racial difference occurred among males as well as females.[52] Michigan results from 1985 are similar with Blacks making up only 13.9 percent of the Michigan population but accounting for 33.1 percent of YPLL from cerebrovascular disease.[53]

TABLE 2-4

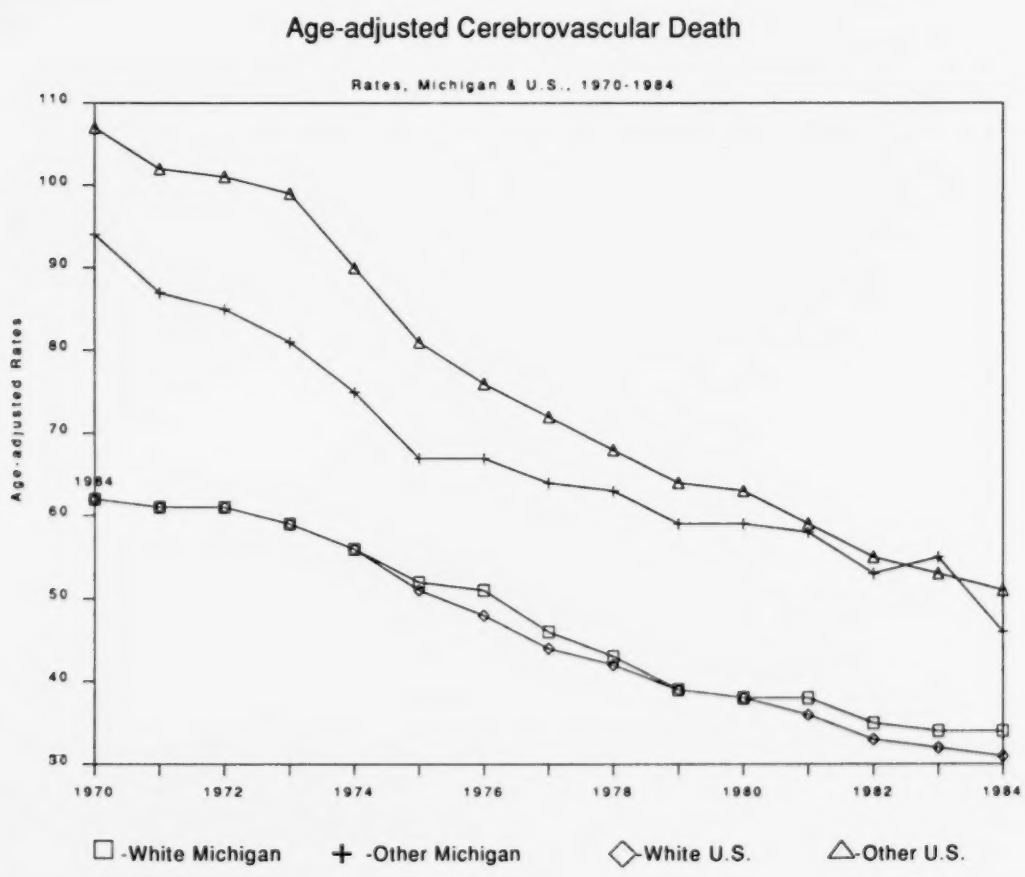
Years of Potential Life Lost before Age 65 (YPLL) Due To Cerebrovascular Disease by Race—Michigan, 1985, United States, 1983.

	YEARS OF POTENTIAL LIFE LOST					
	MICHIGAN			UNITED STATES**		
RACE	NO.	(%)	RATE*	NO.	(%)	RATE*
White	7328	(67.9)	95.0	181209	(70.0)	104.0
Other	3466	(32.1)	252.3	76310	(30.0)	240.0
Black	–	–	–	71112	(28.0)	275.0

*YPLL/100,000 persons

** Source: Centers for Disease Control. Premature mortality due to cerebrovascular disease—United States, 1983.

FIGURE 2-2



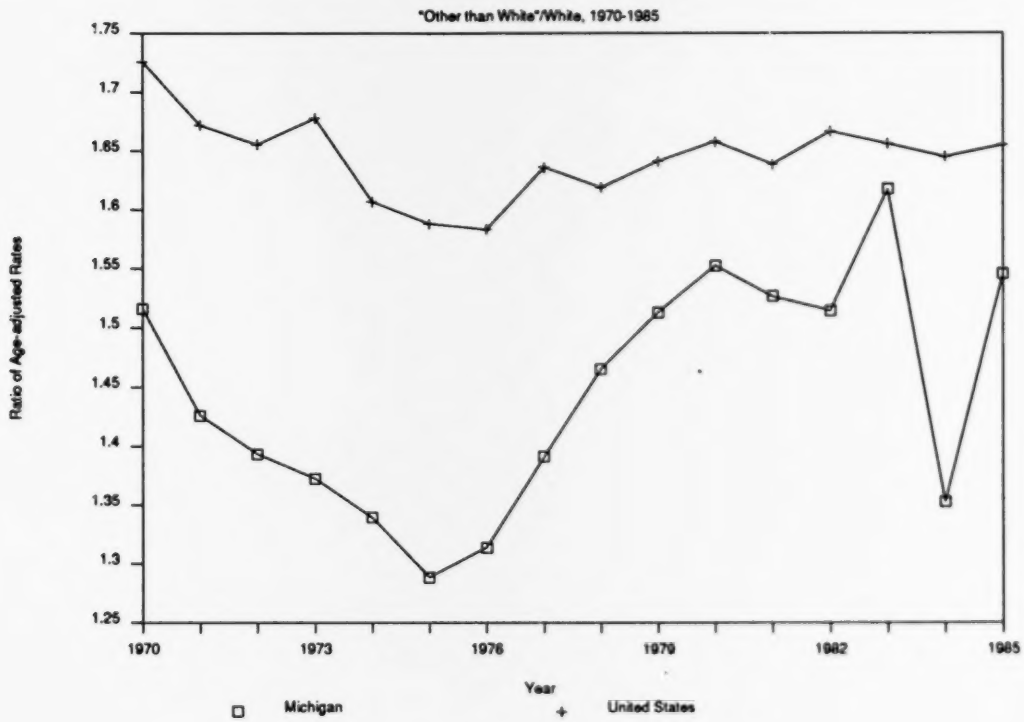
Cerebrovascular disease and non-Black minorities

Age-adjusted rates for cerebrovascular disease were generally lower for Asian and Pacific Islanders than for Whites in Michigan in 1980 (See Table 2-1). A similar pattern was observed in national rates.[54] A national study reveals that Hispanic rates were also lower for cerebrovascular disease (Cubans: 47.7, Mexicans: 72.3, Puerto Ricans: 56.7 vs. Whites: 76.7, Blacks: 112.8 per 100,000 population).[55] However, the rate of cerebrovascular disease among Michigan Indian males was higher than that for any other age/race/sex sub-group. As shown in Table 2-1, this rate was 84 percent higher than that for White males and 23 percent higher than the rate for Black males in 1980. The comparable rate for Michigan Indian females was not elevated.

It should be kept in mind that rates for Asian and Pacific Islanders and American Indians may be understated as was discussed above. Given this caution, the excess mortality from cerebrovascular disease experienced by Native American males may be even greater than is indicated in Table 2-1. Native Americans experience many of the risk factors associated with cerebrovascular disease such as hypertension, diabetes and obesity which may explain the high rate for this group. It is not clear however why the heart disease rates for

FIGURE 2-3

Ratio of Cerebrovascular Death Rates



this group are relatively low or why females do not suffer high stroke mortality rates. It is important that these questions receive further study and that attention be given to risk factors for heart disease and stroke among Native Americans.

Recent Trends in Cardiovascular and Cerebrovascular Disease

Studies show that there were reductions in racial disparity for certain disease categories between the late 1960's and the late 1970's. For example, a cross-sectional study of national data by Persky and colleagues found that the mortality ratios for hypertensive diseases, hypertensive heart disease and cerebrovascular disease steadily decreased from 1968 to 1978.[56] This was in contrast to the steady increase that occurred between 1940 and 1967 in the other than White/White mortality ratios for hypertensive and cerebrovascular diseases. The 1968-1978 improvement in the race ratios stemmed from a greater rate of decline for mortality rates among minorities than among Whites. One explanation for the trend in mortality ratios in this period, Persky et al. argue, was that between the early 1960's and late 1970's Black hypertensives made greater gains in bringing their blood pressure under control than did White hypertensives. Michigan data show a similar trend of improvement in the ratio of other than White/White cerebrovascular disease mortality rates in the early to mid-1970's (Figure 2-3). This trend came to an end, however, around 1976 or 1977 in Michigan. This disparity between Whites and other than Whites has generally been increasing since then. The 1985 ratio was greater than that observed in 1970. In absolute terms, the other than White cerebrovascular disease mortality rate appears to be stagnating in Michigan. Recalling the increase in Michigan's other than White rates for diseases of the heart (Figure 2-1), it must be concluded that a general deterioration in minority, particularly Black, health status has occurred in the past decade.

A general deterioration in minority, particularly Black, health status has occurred in the past decade.

Conclusion

The trend in heart disease may be viewed as an indicator of the overall health status of the adult population. The rapidly declining heart disease death rates of the 1970's represented an important gain in the health status of the population as a whole. Heart disease death rates have continued to drop in the 1980's for Whites and for other than White persons nationally. For Michigan Blacks, however, progress as measured by this indicator came to a halt a decade ago. The increase in mortality rates for this cause strongly suggests that the overall health status of Blacks is deteriorating.

Notes

1. Office of the State Registrar and Center for Health Statistics, *Michigan Health Statistics, 1985.* Lansing, MI: Michigan Department of Public Health, July 1987.

2. In the calculations of mortality rates, the category "other than White" includes Blacks, Asians and Pacific Islanders, and Native Americans. Hispanics are included in the "White" category unless otherwise specified.

3. Subcommittee on Cardiovascular and Cerebrovascular Diseases. Executive Summary. *Report of the Secretary's Task Force on Black and Minority Health, Vol. I: Executive Summary,* p. 108 Figure 7. Washington: U.S. Department of Health and Human Services, January, 1986.

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7. Chronic Disease Surveillance Section. E.M. Mills (ed.). *Coordination of High Blood Pressure Control in Michigan.* Lansing, MI: Michigan Department of Public Health, April, 1985.

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53. It should be noted that the discrepancy in YPLL rates for minorities as compared to Whites is even greater than that in age-adjusted death rates because the YPLL statistic only takes account of deaths prior to age 65. Age-specific death rates are most discrepant below age 65.

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Chapter Three

DIABETES

Diabetes is more prevalent in the United States in minority populations than in the White population. Nationally, Blacks, Hispanics, Native Americans, and Japanese Americans all have elevated diabetes prevalence rates. The prevalence of diabetes may also be elevated for other Asian American groups.

Background

Diabetes mellitus is a heterogeneous group of disorders characterized by abnormally high levels of glucose in the blood resulting from the body's failure to properly metabolize carbohydrates, fats, and proteins. There are several types of diabetes.

Insulin-dependent diabetes mellitus (IDDM), is characterized by low levels or a total absence of insulin; people with this type of diabetes must inject insulin daily. Insulin-dependent diabetes, which may occur at any age but typically develops in childhood or young adulthood, accounts for 5 to 10 percent of the diabetic population in the United States.

The onset of non-insulin dependent diabetes mellitus (NIDDM), which accounts for 90 to 95 percent of all cases of the disease, usually occurs after age 40 and is much more common among persons who are overweight. Although insulin levels may be high, normal, or low, the ability of people with this type of diabetes to use insulin effectively is impaired. Those with NIDDM often can manage the disease through diet, weight control, and exercise, but treatment with oral medications or insulin may be necessary.

In gestational diabetes, blood glucose levels rise during pregnancy and usually revert to normal after delivery. Women who are older

and overweight or have family histories of diabetes are more likely to develop gestational diabetes. Women who have had gestational diabetes are at increased risk of developing NIDDM later in life.

Prevalence of Diagnosed Diabetes

Blacks

National Health Interview Survey (HIS) data for 1982-1985 indicate that 3.7 percent of Blacks had diagnosed diabetes, 1.54 times the White rate of 2.4. If these rates were adjusted for age, this discrepancy would have been still larger. Results from the 1979-81 HIS showed that the Black prevalence rate was 1.36 times the White rate on an unadjusted basis and 1.74 times the White rate when these figures were adjusted for age.[1]

The number of Blacks estimated to have diabetes is about one million nationally and about 53,000 in Michigan.

Data from a 1983-84 Michigan household interview survey of adults show a similar gap in the Black/White prevalence of diabetes. The Michigan prevalence rate was 5.5 percent among Black adults, which was 1.53 times the White rate of 3.6 percent. If national estimates for diabetes prevalence among children are added, the overall Michigan prevalence rates would be 4.2 percent for Blacks and 3.0 percent for Whites. The number of Blacks estimated to have diabetes is about one million nationally and about 53,000 in Michigan.

The Black/White discrepancy in diabetes prevalence is especially great among women. Nationally, 4.5 percent of all Black females had diabetes in 1982-85, 1.73 times the White female rate of 2.6 percent. In the 1983-84 survey of Michigan adults, the prevalence for Black women was 7.5 percent, 1.79 times the rate of 4.2 percent for White women. For Michigan females as a whole, including children, the prevalence rate was an estimated 5.4 percent for Blacks and 3.5 percent for Whites.

Hispanics

HIS data for 1979-1981 show little difference between the prevalence of diabetes for Hispanic adults as a whole and the general population. The prevalence rate for Hispanics age 45 to 64, however, was elevated compared with that for the general population. The prevalence rate for Hispanic women age 45 to 64 was 10.5 percent, nearly double the rate of 5.5 percent for women of all races in this age group. The rate for Hispanic men in this age group was also elevated, 8.7 percent compared to 5.5 percent for men of all races in the same age group.[2]

Data from the 1979 California Hypertension Survey provides additional evidence for elevated diabetes prevalence among Hispanics. California survey results showed that Hispanic adults in that state had a prevalence of diabetes of 6.0 percent, 1.5 times higher than the 4.1 percent reported for non-Hispanic Whites.[3]

The 1983-84 Michigan household survey sample did not include enough Hispanics to allow for the computation of a reliable state diabetes prevalence rate. Data from the Michigan hypertension screening clinics, however, showed that diabetes was more than one and a half times as prevalent among Hispanics than among non-Hispanic Whites screened in 1981-82.[4] The Office of Services to the Aging is conducting a needs assessment survey of 300 Hispanics age 60 and older. This survey will provide some insight into problems faced by one segment of the Hispanic population in Michigan.

Diabetes was more than one and a half times as prevalent among Hispanics than among non-Hispanic Whites screened in 1981-82.

The prevalence of diabetes may be especially high among Mexican Americans. Recent studies done in San Antonio, Laredo, and Starr County, Texas, indicate that diabetes prevalence rates are high among Mexican Americans in these communities.[5] There have been no recent studies of the prevalence of diabetes in other Hispanic subgroups. The Hispanic Health and Nutrition Examination Survey being conducted by the National Center for Health Statistics should provide improved estimates of the prevalence of diabetes in the Hispanic population and its subgroups.

Although there are conflicting data on the prevalence of diabetes among Hispanics, diabetes appears to be more common in this population than among non-Hispanic Whites. Elevation in the prevalence of diabetes appears to be especially likely among Mexican Americans.

Native Americans

Although there is no overall estimate of the prevalence of diabetes among Native Americans in the United States, data from studies of a large number of tribes seem to indicate that diabetes is more common among Native Americans than among any other population subgroup. The Pima Tribe of Arizona, which has been extensively studied, has the highest rate of diabetes in the world—50 percent of the adults age 35 or older have diabetes. Other tribes in Arizona, New Mexico, Nevada, Texas, Oklahoma, New York, Florida, and North Carolina have reported diabetes prevalence rates of 20 percent or greater among adults age 35 or older.[6]

Population survey data on the prevalence of diabetes among Native Americans in Michigan are not available, but there are indications that diabetes is more common than in the general population. During 1982-83, for example, of 511 Indian people screened at Native American health fairs in Ingham and Kent counties, 8.8 percent had diabetes.[7]

Asian Americans

There have been several studies of diabetes in Japanese Americans which indicate that the disease is more common in this population than it is in the White population. Studies comparing Japanese immigrants in the United States with the Japanese living in Japan show elevated prevalence rates among the immigrants. There has only been one study reporting rates of diabetes in other Asian populations, a 1958-59 survey of employed persons on Oahu, Hawaii. Age-adjusted diabetes rates were two to three times higher for the four Asian groups (Chinese, Filipinos, Japanese, and Koreans) than the comparable rate for Whites.[8]

Undiagnosed Diabetes

The high prevalence of undiagnosed diabetes indicates a need for stepped up efforts at detecting this disease.

Data from the 1976-1980 National Health and Nutrition Examination Survey II showed that undiagnosed diabetes among adults aged 20-74 is almost as common as diagnosed diabetes. The Black/White ratio was similar to that found for diagnosed diabetes.[9] For the Black population in Michigan, an estimated one hundred thousand persons have either diagnosed or undiagnosed diabetes. The high prevalence of undiagnosed diabetes indicates a need for stepped up efforts at detecting this disease in high risk persons and bringing patients under appropriate treatment.

Historical Trend

Diabetes appears to be relatively more common among almost all U.S. minority groups for whom data are available than it is among the non-minority population. However, this elevation in diabetes prevalence rates in minority populations appears to be a recent phenomenon. Diabetes was considered rare among Native Americans in the 1930's. HIS data showed little difference in the prevalence of diabetes between Blacks and Whites in the 1960's. A substantial gap in Black/White prevalence rates developed during the 1970's and has persisted into the 1980's.[10] White prevalence rates also rose in the 1970's, but the increase was at a slower rate and did not persist for as long a period.

Low Income and Other Demographic Risk Factors

The age-adjusted prevalence of diabetes in the United States is elevated among persons with low income; intermediate among middle income persons; and lower than average among higher income persons. Within the Black population nationally, there was no consistent relationship between the prevalence of diabetes and income. Blacks with fewer than twelve years of education had a higher prevalence rate than did Blacks with twelve or more years of education. The negative association between educational attainment and diabetes was apparent for people with family incomes both above and below $10,000.[11]

Diabetes Hospitalizations

Blacks in Michigan were more than twice as likely to be hospitalized for diabetes as were non-Hispanic Whites in 1985. There were 5,412 hospital discharges for Blacks with a primary diagnosis of diabetes, a rate of 42.8 per 10,000 population or two and one half times the White rate of 17.0 (Table 3-1). On an age-adjusted basis, the hospitalization rate for Blacks was about three times the White rate. The hospitalization rate for other races was 20.4, 20 percent above the White rate. Population data for computing group-specific rates for Hispanics, American Indians, and Asian and Pacific Islanders are not available. Moreover, there may be considerable underreporting for these groups and for the other race category in general.[12]

In addition to the numerous admissions with treatment of diabetes as the primary concern, there are a considerable number of hospitalizations with diabetes as a contributing or complicating factor. For hospitalizations with any mention of a diagnosis of diabetes, the Black rate of 176.0 per 10,000 was 56 percent higher than the White rate of 113.0 (Table 3-2). The rate for other races (118.0) was slightly higher than the White rate.

TABLE 3-1

Number of Hospitalizations and Discharge Rates for Patients with a Principal Diagnosis of Diabetes by Detailed Race or Ethnic Group, Michigan, 1985.

RACE/ETHNICITY	TOTAL DISCHARGES	CRUDE RATE
White Non-Hispanic	13,077	17.0
Black	5,412	42.8
Hispanic	90	NA
Other	222	20.4
American Indian	23	NA
Asian/Pacific	11	NA
Other	188	NA
Not Stated	510	NA
Total	19,311	21.2

TABLE 3-2

Number of Hospitalizations and Discharge Rates for Patients with a Principal or Additional Diagnosis of Diabetes by Detailed race of Ethnic Group, Michigan, 1985.

RACE/ETHNICITY	TOTAL DISCHARGES	CRUDE RATE
White Non-Hispanic	87,197	113.0
Black	22,266	176.0
Hispanic	468	NA
Other	1,293	118.0
American Indian	145	NA
Asian/Pacific	61	NA
Other	1,087	NA
Not Stated	3,292	NA
Total	114,616	126.0

Complications of Diabetes

Persons with diabetes are at risk for a number of complications. Small blood vessel disease develops in the majority of diabetic patients and manifests itself in a variety of diabetes complications. Michigan 1985 hospital discharge rates for minorities with diabetes complications were generally higher than they were for Whites. The percentage of diabetes hospitalizations in which complications were mentioned was similar in most cases for minorities and

Whites. It is reasonable to conclude, then, that the higher overall rate of diabetes hospitalizations for minorities was not due to more frequent hospitalizations of less serious cases but rather to the greater frequency of equally serious cases in these populations.[13]

Eye Disease

Diabetic eye disease, including proliferative diabetic retinopathy and maculopathy, can lead to blindness. Fortunately, treatments are now available which may save the diabetic patient's sight, if the conditions are detected early. The Michigan Department of Public Health recommends annual examinations by an ophthalmologist. Modern treatments such as laser photocoagulation can take place in the ophthalmologist's office. Many patients are not receiving ophthalmological examinations in a timely manner, however.[14] The public health community must address the problem of financial barriers to these necessary specialist services.

TABLE 3-3

Number of Hospitalizations and Discharge Rates for Patients with a Diagnosis of Diabetic Retinopathy by Detailed Race or Ethnic Group, Michigan, 1985

RACE/ ETHNICITY	TOTAL DISCHARGES	RETINOPATHY DISCHARGES	CRUDE RATE	PERCENTAGE
White				
Non-Hispanic	87,197	2,224	2.9	2.6%
Black	22,266	560	4.4	2.5%
Hispanic	468	16	NA	3.4%
Other	1,293	42	3.9	3.3%
American Indian	145	3	NA	2.1%
Asian/Pacific	61	1	NA	2.0%
Other	1,087	38	NA	3.5%
Not Stated	3,292	59	NA	1.8%
Total	114,516	2,901	3.2	2.5%

Minorities in Michigan had higher rates of hospitalization for diabetic retinopathy. The rate for Blacks was 4.4 per 10,000 or one and one half times the White rate of 2.9 (Table 3-3). The rate for other races was 3.9 or one and one third times the White rate.

Amputations

Foot complications due to small blood vessel disease and neuropathy are another serious complication of diabetes. These can lead to amputation of a lower extremity. The discharge rate for amputations was 2.9 per 10,000 for Blacks, 71 percent higher than the White rate of 1.7 (Table 3-4). The rate for other races of 2.2 per 10,000 was 29 percent higher than the White rate. Diabetes experts believe that half of diabetes-related amputations could be prevented if appropriate foot care practices were followed by providers and patients.[15]

TABLE 3-4

Number of Hospitalizations and Discharge Rates for Patients with a Diagnosis of Diabetes and Amputation of the Lower Limb by Detailed Race or Ethnic Group, Michigan, 1985.

RACE/ ETHNICITY	TOTAL DISCHARGES	DISCHARGES WITH AMPUTATIONS	CRUDE RATE	PERCENTAGE
White				
Non-Hispanic	87,197	1,293	1.7	1.5%
Black	22,266	364	2.9	1.6%
Hispanic	468	9	NA	1.9%
Other	1,293	24	2.2	1.9%
American Indian	145	2	NA	1.4%
Asian/Pacific	61	3	NA	5.9%
Other	1,087	19	NA	1.7%
Not Stated	3,292	44	NA	1.3%

The Michigan Department of Public Health Diabetes Control Program (DCP) seeks to expand health care provider awareness of appropriate foot care practices through a variety of professional education activities. Increasing patient awareness of foot and other self-care issues is also a goal of the DCP. The DCP has furthered the development of patient education programs that include pre-instructional assessment of foot and skin care knowledge and a curriculum that contains instructional objectives in this area.

Kidney Disease

Diabetes is also a cause of kidney disease. The combination of diabetes and hypertension appears to be synergistic for the development of kidney disease. Minorities are at higher risk for hypertension as well as diabetes and thus the risk of

developing kidney disease is particularly elevated in minority populations. The racial discrepancy in hospitalization rates for the kidney disease diagnoses of nephritis, nephrotic syndrome or nephrosis was greater than for any other complication. The Black rate of 14.9 per 10,000 was two and one quarter times the White rate of 6.6 and the rate of 10.0 for other races was one and one half times the White rate (Table 3-5).

Data from the Michigan Kidney Registry show that Blacks have a much higher rate of end stage renal disease (ESRD) and, specifically, of end stage renal disease caused by diabetes. Overall, Blacks represented 34.6 percent of all ESRD patients at the end of 1985, with a rate of 11.5 per 10,000 population, more than three times the White rate of 3.5 (Table 3-6). The discrepancy in Black/White rates was even greater (almost 4 to 1) when new cases of ESRD are considered. On a cause-specific basis, the discrepancy in race-specific rates was more than seven to one for hypertension and four to one for diabetes.

TABLE 3-5

Number of Hospitalizations and Discharge Rates for Patients with a Diagnosis of Diabetes and Any Mention of Nephritis, Nephrotic Syndrome, or Nephrosis by Detailed Race or Ethnic Group, Michigan, 1985.

RACE/ ETHNICITY	TOTAL DISCHARGES	DISCHARGES WITH NEPROPATHY	CRUDE RATE	PERCENTAGE
White				
Non-Hispanic	87,197	5,062	6.6	5.8%
Black	22,266	1,890	14.9	8.5%
Hispanic	468	37	NA	7.9%
Other	1,293	109	10	8.5%
American Indian	145	13	NA	9.0%
Asian/Pacific	61	13	NA	25.5%
Other	1,087	83	NA	7.6%
Not Stated	3,292	151	NA	4.6%
Total	114,516	7,349	8.0	6.3%

TABLE 3-6

Number of End Stage Renal Disease Patients as of December 31, 1985 by Detailed Race or Ethnic Group, Michigan.

RACE/ETHNICITY	NUMBER	CRUDE RATE
White Non-Hispanic	2,662	3.5
Black	1,454	11.5
Hispanic	55	NA
Other	31	2.9
American Indian	11	NA
Asian/Pacific	17	NA
Other	3	NA
Not Stated	0	NA
Total	4,202	4.6

Complications of Pregnancy

Maternal diabetes increases the risk of morbidity and mortality to the fetus. There is evidence, however, that strict control of blood glucose levels before conception and throughout pregnancy in women with diabetes reduces the incidence of congenital malformations, perinatal morbidity and mortality.[16] Estimates of the proportion of pregnancies occurring among women with preexisting diabetes range from 0.4 percent to 1.5 percent. Gestational diabetes is a form of diabetes which only occurs during a woman's pregnancy. It complicates an estimated 2.5 to 5.0 percent of all pregnancies in the U.S. each year. The Michigan Department of Public Health recommends screening of all pregnant women for gestational diabetes between 24 and 28 weeks gestation. Risk factors for the development of gestational diabetes include obesity, family history of diabetes in a first degree relative, previous adverse pregnancy history, previous birth of a large baby (4500 grams or greater), and recurrent infections. Women who develop gestational diabetes are at very substantial risk for subsequent development of overt disease.[17] Offspring of women with gestational diabetes may be at risk for obesity and impaired glucose tolerance later in life.[18]

National data do not indicate a higher prevalence of diabetes in pregnancy among minority women than among non-minority women. Michigan hospital discharge data, however, showed that Black women were twice as likely as White women to have diabetes mentioned on their pregnancy-related hospital discharge records in 1985.[19]

Diabetes and Hypertension

Hypertension is about twice as common in persons with diabetes as in those without diabetes. The coexistence of diabetes and hypertension is about twice as common among Blacks as among Whites.[20] Among persons screened by Michigan blood pressure screening programs in 1981-82, Native American women, Black women, and Hispanics were at unusually high risk for the occurrence of diabetes and hypertension.[21] Hypertension in the diabetic population contributes not only to kidney disease but to coronary heart disease, stroke, peripheral vascular disease, and lower extremity amputations. It may also be a factor in the development of diabetic retinopathy.[22]

Native American women, Black women, and Hispanics were at unusually high risk for the occurrence of diabetes and hypertension.

Heart-Related Problems

Cardiovascular disease is more common among people with diabetes than among people without diabetes.[23] Persons with diabetes are at a two-fold increased risk for developing angina pectoris, myocardial infarction or sudden death due to cardiovascular complications.

Mortality

Other than White age-adjusted mortality rates for diabetes have been consistently higher than White rates for many years. In 1985 the Michigan other than White age-adjusted rate was 17.2 per 100,000, 83 percent higher than the comparable White rate of 9.4. The other than White age-adjusted mortality rate declined in the 1970's but appears to be stagnating in the 1980's (Figure 3-1).

Diabetes is the seventh leading cause of death in Michigan. There were 1387 deaths with diabetes as the underlying cause in 1985, including 223 deaths of other than White persons. These deaths represent only a small proportion of diabetes-related deaths, however. The total number of deaths with diabetes as either the underlying or contributing cause was 6437 in 1986, including 970 other than White deaths. Studies indicate, moreover, that there are a significant number of diabetes-related deaths in which diabetes is not listed on the death certificate.

Diabetes Deaths Under Age 45

The difficulty faced by low income persons, who are disproportionately minorities, in managing diabetes was highlighted by a recent study of deaths of persons with diabetes under age 45 conducted by the Michigan Diabetes Control Program. One fourth of

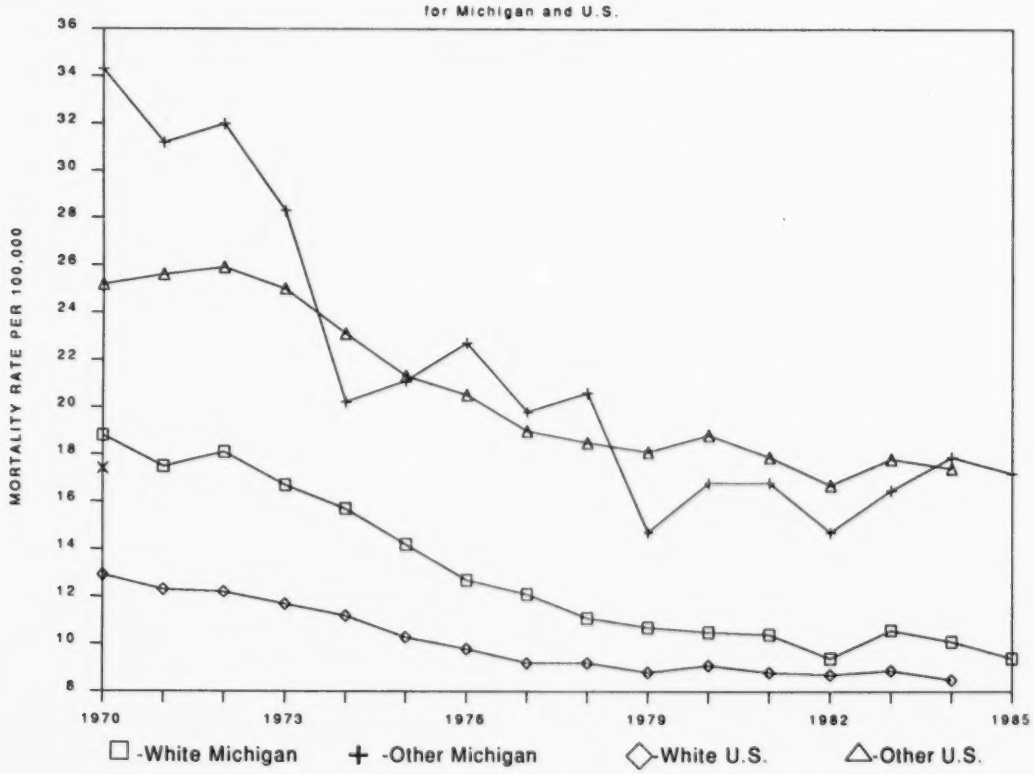
those who died were other than White persons, although they comprised only one sixth of the total population under age 45. The under age 45 diabetes death rate for Whites was 1.1 per 100,000 Michigan residents while that for the other than White population was 2.0. Forty six percent of those for whom income data was available had incomes below eight thousand dollars, a proportion three and one half times greater than that found in a 1983-84 general population survey.[24] Another indication of the problem of poverty in this group of patients came from hospital records. Thirty seven percent of those hospitalized at the time of death were Medicaid patients and an additional 11 percent were reported as uninsured or "self-pay."

A majority of the patients suffered from long term complications of diabetes and more than one third experienced acute complications such as frequent occurrence of ketoacidosis or ketoacidosis just prior to death. About 20 percent of the patients had problems with substance abuse, depression, or other mental disorders. Given the complexity of diabetes, patients need a regular physician to successfully manage this disease. Nevertheless, one fourth of the patients appeared to lack such care.

FIGURE 3-1

AGE-ADJUSTED DIABETES DEATH RATE

for Michigan and U.S.



Causes of Diabetes

As mentioned earlier, most persons with diabetes (90-95 percent of all person with the disease) have non-insulin dependent diabetes. Although a genetic component has been identified, the overwhelming majority of persons who develop NIDDM are or have been obese. National data from examination surveys conducted in 1960-1962, 1971-1974, and 1976-1980 showed Black women had a prevalence of obesity nearly twice that of White women (about 47 percent compared with about 26 percent).[25] Michigan data from 1980 and 1983-84 household interview surveys similarly showed Black women reporting a much higher rate of obesity. The national examination data showed that obesity was inversely related to family income and education. Social and environmental risk factors appear to play an important role in the development of diabetes.

Conclusion

The goal of diabetes therapy is the normalization of blood sugar levels. Four main elements comprise the treatment of diabetes mellitus: diet, exercise, medication and educational services which ensure that the patient understands how to balance diet, exercise and medication within his or her lifestyle. Appropriate medical care for diabetes includes prescribing the right medication, diet and exercise as well as providing comprehensive instruction about the therapies and self-care activities which actively support patient self-reliance and responsibility.[26] The prescribed diet must be tailored to the patient's social and ethnic background and lifestyle.[27] For the majority of persons with non-insulin dependent diabetes, weight loss is an important therapeutic goal in the effort to achieve normal blood sugar levels. Good metabolic control may prevent or delay the long-term complications of diabetes.

Solving the general problem of access to care is particularly important for diabetic patients.

The complexity of diabetes is such that diabetic patients need, in addition to good primary medical care and individualized educational and counseling services, access to a variety of specialists. Given the fact that diabetes is more common among persons with low income, solving the general problem of access to care is particularly important for diabetic patients.

Notes

1. These figures are derived from data presented in Drury, T.F., and A.L. Powell. Prevalence of Known Diabetes Among Black Americans. *Advance Data from Vital and Health Statistics*. No. 130, DHHS Pub. No. (PHS) 87-1250. Hyattsville, MD: Public Health Service, National Center for Health Statistics. July 31, 1987.

2. These rates are computed from the data presented in Table 4 of Drury, T.F., K.M. Danchik, and M.I. Harris. Sociodemographic Characteristics of Adult Diabetics. In M.I. Harris and R.F. Hamman (eds.). *Diabetes in America*. NIH Pub. No. 85-1468. Washington: Department of Health and Human Services. August 1985. The same table is reproduced as an appendix but not discussed in Stern, P. Diabetes in Hispanic Americans. In M.I. Harris and R.F. Hamman (eds.). *Diabetes in America*. NIH Pub. No. 85-1468. Washington: Department of Health and Human Services, August 1985.

3. California Department of Health Services, *California State Plan for the Control of Diabetes*, p. 14, Appendix I–13. 1983.

4. Holmes, R.E., et al. Increased Prevalence of Diabetes Mellitus in Hypertensive Minority Group Females: A Special Risk Group. Presented at the National Conference on High Blood Pressure Control, April 20-22, 1983.

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11. National Center for Health Statistics, T.F. Drury, and A.L. Powell. Prevalence of Known Diabetes Among Black Americans. *Advance Data from Vital and Health Statistics*. No. 130. DHHS Pub. No. (PHS) 87-1250. Hyattsville, MD: Public Health Service., July 31, 1987.

12. Note that there is only one race/ethnicity variable on the Michigan Inpatient Database so it was not possible to allocate discharges of Hispanics to any of the race categories. As a result, rates for Whites, Blacks, and other races may all be slightly understated.

13. Data on the percentage of all diabetes hospitalizations with the specific complication are presented in the tables along with the rates. For simplicity, the discussion in the text is limited to a comparison of the rates. (In the percentage calculations, the denominator is all hospitalizations for the specified group; in the rate calculations, the denominator is the population in the specified group).

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15. National Diabetes Advisory Board. *The Prevention and Treatment of Five Complications of Diabetes*. DHHS Pub. No. 83-8092. Washington: Public Health Service. U.S. Government Printing Office. 1983.

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17. O'Sullivan, J.B., M.I. Harris, and J.L. Mills. Maternal Diabetes in Pregnancy. In M.I. Harris and R.F. Hamman (eds.). *Diabetes in America*. NIH Pub. No. 85-1468. Washington: Department of Health and Human Services. August 1985.

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22. Working Group on Hypertension in Diabetes and the National High Blood Pressure Education Program, *Hypertension in Diabetes*. Bethesda, MD: U.S. Department of Health and Human Services, January 16, 1987.

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Chapter Four

CANCER

According to 1985 state and national data, cancer was a leading cause of death second only to heart disease. The Michigan 1985 cancer age-adjusted death rate was somewhat higher than the comparable national rate (182.8 and 169.5 per 100,000, respectively).[1]

Blacks

According to the report *Cancer Incidence and Mortality, Michigan* from the Michigan Cancer Surveillance Program the age-adjusted cancer incidence rate for Blacks was about 20 percent higher than that for Whites in Michigan in 1985.[2] It is important to note that the higher incidence for Blacks is due to higher rates among particular sites. As shown in Table 4-1, these sites are lip, oral cavity and pharynx, stomach, pancreas, larynx, lung and bronchus, cervix uteri, and prostate. White incidence rates, however, were higher for urinary bladder, skin, female breast, corpus uteri, and ovary.

The age-adjusted cancer mortality rate was also higher among Blacks than Whites in 1985. The rate for Black males was 37 percent higher than the rate for White males (311.7 vs. 227.2 per 100,000 population) while the rate for Black females was 20 percent above the comparable White rate (174.4 vs. 145.7 per 100,000). This pattern occurred even among sites for which Blacks had lower incidence rates, such as the breast (Table 4-2).

National data also indicate that Blacks suffer higher cancer incidence and mortality rates than do Whites. According to the *Report of the Secretary's Task Force on Black and Minority Health*, the sites of excess incidence and mortality in the U.S. Black population include

TABLE 4-1

Age-adjusted incidence rates of invasive cancers by primary site, race and sex, Michigan 1985

PRIMARY SITE	WHITE MALE	WHITE FEMALE	BLACK MALE	BLACK FEMALE
Gastro-intestinal tract system and peritoneum				
Lip, oral cavity and pharynx	13.5	4.8	19.9	*
Stomach	8.8	3.8	20.0	*
Pancreas	9.0	6.4	17.8	11.9
Respiratory system				
Larynx	8.3	1.3	12.3	*
Lung and Bronchus	76.1	30.0	128.8	41.2
Genitourinary organs				
Cervix Uteri	*	8.2	*	16.2
Prostate Gland	77.2	*	125.1	*
Urinary Bladder	28.3	7.2	13.1	*
Corpus uteri	*	22.2	*	12.6
Ovary	*	13.5	*	9.0
Breast	*	97.4	*	89.2
Melanoma of skin	8.4	6.2	*	*

*Rate is considered statistically unreliable.

Source: *Cancer Incidence and Mortality, Michigan 1985*

TABLE 4-2

Age-adjusted mortality rates of invasive cancers by primary site, race and sex, Michigan 1985

PRIMARY SITE	WHITE MALE	WHITE FEMALE	BLACK MALE	BLACK FEMALE
Gastro-intestinal tract system and peritoneum				
Lip, oral cavity and pharynx (1)	4.7	1.6	8.1	2.2
Stomach (2)	7.5	3.3	16.0	6.3
Pancreas (2)	10.4	7.2	17.8	10.2
Respiratory system				
Larynx (1)	2.6	0.5	4.9	1.0
Lung and Bronchus	74.2	28.1	107.3	33.0
Genitourinary organs				
Cervix Uteri (2)	*	2.6	*	5.3
Prostate Gland	23.4	*	48.0	*
Urinary Bladder (1)	7.2	1.8	4.7	2.5
Corpus uteri (3)	*	2.0	*	2.6
Ovary (2)	*	8.2	*	5.7
Breast	*	28.7	*	32.6
Melanoma of skin (2)	2.6	1.6	*	*

(1) Rates 1982-1985
(2) Rates 1984-1985
(3) Rates 1981-1985
*Rate is considered statistically unreliable.

Source: *Cancer Incidence and Mortality, Michigan 1985*

TABLE 4-3

Age-Adjusted Death Rates for Malignant Neoplasms by Sex and Race, Michigan Residents, 1980

	SEX	
RACE	MALE	FEMALE
White	163.2	109.1
Black	225.7	126.6
American Indian	108.2	83.8
Asian/Pacific Islander	55.8	41.5

lung, esophagus, stomach, pancreas, prostate, cervix, and corpus uteri.[3]

Figure 4-1 shows the age-adjusted cancer mortality rates from 1970 to 1985 for Whites and other than Whites in Michigan. This figure clearly depicts the higher mortality rates for the other than Whites. While cancer rates have increased for both groups during this time period, the other than White rate has increased at a greater rate.

Other Minorities

According to the *Secretary's Report on Black and Minority Health*, Hispanics, Asians and Pacific Islanders, and Native Americans have lower overall age-adjusted cancer incidence and mortality rates than do non-Hispanic Whites.[4] A similar pattern in cancer mortality rates was observed in Michigan in 1980 (Table 4-3). One possible reason for these outcomes is that members of these groups frequently are not identified as minority persons on death certificates. A study matching 1960 census and death records concluded that observed death rates for Native Americans, Chinese, and Filipinos were much lower than death rates would have been if only census information had been used.[5]

Since some members of these groups are in the process of adapting to majority cultural practices, it is possible that they will eventually develop cancer rates similar to or higher than those of the majority culture. For example, a study of cancer rates of Hispanics and Whites in the Denver area during 1969-71 and 1979-81 showed that the initially lower Hispanic rate increased over time and became similar to the White rates. Specifically, the Hispanic rate increased 52 percent for males and 77 percent for females. (In 1980, only 8.5 percent of the Hispanic population in Denver was foreign-born). The authors conclude that the increased rates are due to changes in diet, smoking and alcohol consumption.[6] Among Japanese women, for whom the incidence of breast cancer is relatively low,[7] studies show a gradual increase in breast cancer incidence rates among descendants of immigrants to the United States.[8] The authors conclude that the increased risk of breast cancer among these women resulted from their adoption of a Western diet and life style.

Although overall cancer rates for non-Black minorities appear to be low, it should be noted that some minority groups have an excess incidence of cancer for specific sites. For example, SEER data from 1973-1981 reveal that Hispanics and Japanese-Americans experience stomach cancer at a rate twice that for non-minorities.[9] This excess may be due in part to the consumption of spicy, pickled and smoked foods, which is typical within these cultures.[10] Chinese, Filipinos and Hawaiians experience a somewhat higher incidence of cancer of the esophagus than does the majority population.[11] These excesses may be due to alcohol consumption and smoking as

was indicated for Blacks.[12] Also, extremely hot beverages, which are popular in some Asian cultures, have been found to relate to esophageal cancer.[13] Chinese-Americans, Native Americans and Hispanics experience an excess incidence of cervical cancer. In fact, the rate of cervical cancer for Hispanics is more than twice the rate for non-minorities.[14] The possible causes for this cancer are as yet unknown. Native Americans also have excess rates of cancer of the gallbladder and kidney.[15]

There are several risk factors for cancer. Tobacco use is the most important. . . . and Blacks are more likely to smoke than Whites.

Risk Factors for Cancer

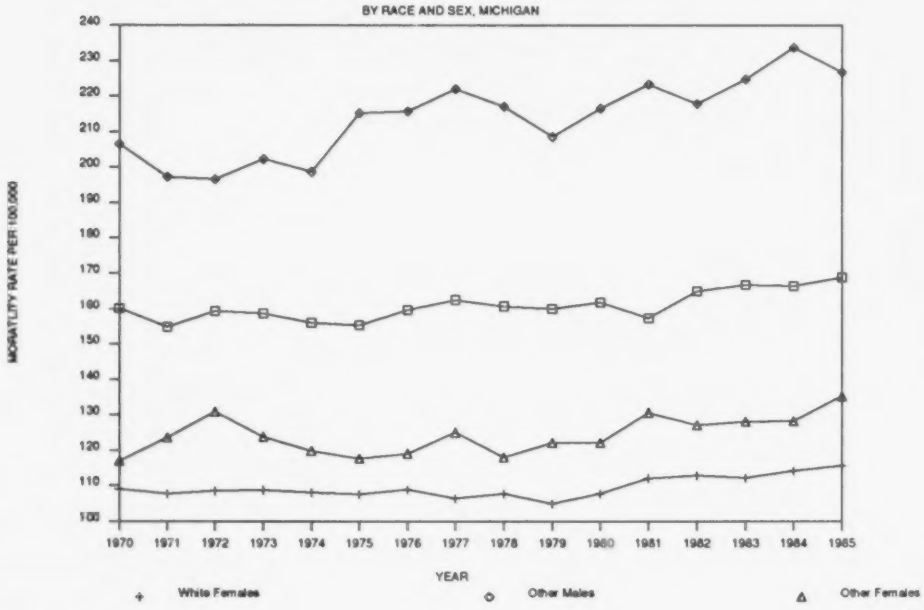
Smoking

There are several risk factors for cancer. Tobacco use is the most important. It has been shown to relate to lung, laryngeal, oral, esophageal, bladder, pancreatic, kidney, and cervical cancer.[16] Blacks are more likely to smoke than Whites according to several studies. For example, the results of the 1983-84 Michigan Blood Pressure Survey reveal that 45 percent of Blacks reported they were current smokers, as compared to 32 percent of Whites.[17] Although men were more likely to report they were current smokers than were women (37 percent vs. 30 percent), both Black men and women

FIGURE 4-1

AGE-ADJUSTED CANCER DEATH RATES

BY RACE AND SEX, MICHIGAN



were more likely to report they currently smoked than were White men (51 and 40 percent, respectively vs. 35 percent).

Unless there is a significant decline in Black smoking rates, the contribution of tobacco related diseases to the racial discrepancy in cancer rates is likely to increase. Current smoking patterns contribute to future disease processes and the current racial discrepancy in smoking rates appears to be larger than in the past. In the Michigan survey, similar proportions of Blacks and Whites have ever smoked cigarettes (60 and 56 percent, respectively). However, about 44 percent of Whites who have ever smoked cigarettes have quit compared to only 25 percent of Blacks.

Although a larger proportion of the Black population smokes, 64.7 percent of White smokers report smoking one or more packs per day while only 32 percent of Black smokers report doing so. Similar patterns in cigarette use have been found nationally as well.[18] The fact that Black smokers consume fewer cigarettes than do White smokers may have important implications in smoking cessation programs as is discussed in Chapter 16.

Nutrition and alcohol consumption

Nutrition and alcohol consumption are two other factors that have been found to relate to cancer. Insufficient intake of necessary vitamins and minerals, and high alcohol consumption are more common among poor individuals than among the population as a whole. Since Blacks and other minorities are more likely to be poor than are non-minorities these risk factors are important among a large segment of the minority population.

Poor general nutrition and low socio-economic status have been shown to relate to esophageal and stomach cancer.

Poor general nutrition and low socio-economic status have been shown to relate to esophageal and stomach cancer.[19] Prostate cancer has been related to hormonal imbalances brought on, in part, by a high fat diet,[20] and insufficient zinc intake.[21] Studies have shown that excessive alcohol consumption increases the risk of cancer of the mouth, esophagus, larynx and tongue.[22] Combined use of alcohol and tobacco have also been shown to raise the risk of cancer of the mouth, esophagus and pharynx.[23]

Exposure to toxic substances

Occupational hazards and exposure to toxic substances may also cause certain cancers. The International Agency for Research on Cancer (IARC) has published reviews of studies that assess the carcinogenicity of certain chemicals. Four of the most familiar chemical carcinogens are listed below:

1. Asbestos, used for fire-proofing and ship building, has been shown to cause lung cancer and mesothelioma, a rare cancer of the

chest and abdominal cavity lining. The health risk from this mineral fiber occurs when asbestos fibers are inhaled.[24]

2. Benzene, a liquid product of petroleum, is used in the chemical and drug industries. Many reports have linked exposure to this liquid with a high incidence of leukemia. Exposure occurs through inhalation of benzene vapors.[25]

3. Chromium and chromium compounds are used in the metal industry to produce stainless steel and other alloys. It is also used to make bricks, glass and ceramics. Exposure to this substance has been linked to lung cancer.

4. Dust from wood, as produced in furniture manufacture, is associated with an increased incidence of cancer of the nose and nasal cavity.[26] Reduction of air-borne dust in the workplace and the use of respirators have been shown to be helpful in reducing the amount of wood dust inhaled by the worker.[27]

Minorities are concentrated in operative and service occupations[28] and are frequently offered jobs that are undesirable to others. They may be, therefore, more likely to hold jobs that involve working with carcinogenic materials.[29] It is important then that workers be aware of ways to protect themselves from the harmful effects of these materials and that agencies such as the Michigan Occupational Safety and Health Administration (MIOSHA) enforce the regulations for these materials. The recent Michigan Right-To-Know amendments to the MIOSHA act provide an excellent information source for covered workers about toxic chemicals and carcinogens.

National data reveal that for many cancers, minorities may have lower five-year survival rates than non-minorities.

Inadequate Treatment and Access to Health Service

Health care services play a role in the prevention and detection of cancer as well as in the proper treatment of cancer once it has developed. Minority individuals often are less informed about factors that cause cancer such as smoking and diet. Furthermore, many programs that are designed to help people modify behaviors that put them at risk for cancer are developed for non-minority individuals and may not be suitable for minorities. Additionally, cancer prevention programs are frequently expensive and consequently inaccessible to the poor and to a large proportion of the minority population. For example, the Michigan Cancer Foundation reports that there are few smoking cessation or early detection cancer screening programs offered in the Detroit health districts that contain many of the city's poor.[30] Chapter Sixteen of this report discusses some Michigan smoking cessation programs that are available to minorities.

National data reveal that for many cancers, minorities may have more aggressive forms of cancer[31] and lower five-year survival rates than non-minorities.[32] For example, data from the Surveillance Epidemiology and End Results Program (SEER) show that for all forms of cancer the five year survival rate for Blacks during 1976-81 was 38 percent as compared to 50 percent for non-minorities.[33]

Native Americans appear to experience relatively fewer cases of cancer and cancer deaths than other ethnic/racial groups, but those who do develop cancer are less likely to survive.[34] The five-year survival rate for Native American males according to 1973-79 SEER data was 26 percent as compared to 40 percent for non-minority males. Thirty-nine percent of female Native Americans survived for five years as compared to 55 percent of non-minority females.[35] The discrepancy in survival rates between Native Americans and Whites was particularly high among males for cancer of the rectum, lung/bronchus, and prostate (28 vs 46; 5 vs 11; and 41 vs 66 percent survival, respectively). For females this discrepancy was greatest for cancer of the stomach, rectum, lung/bronchus, corpus uteri, and breast (7 vs 16; 20 vs 48; 5 vs 15; 68 vs 87; and 55 vs 73 percent survival, respectively).

There is convincing evidence that for some cancers early detection and appropriate care do much to improve survival rates. For example, data from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute show that 85 percent of the women who were treated for breast cancer when the tumor was localized were alive five years after diagnosis. In comparison, only 10 percent of those who began treatment after the disease had spread reached the five year survival mark.[36]

Improved care for minorities can result in survival rates comparable to White rates.

Evidence suggests that minorities are less aware of early detection techniques for cancer than are non-minorities. For example, in a national survey, Black women knew less about the early warning signs of cancer than did non-minorities and underestimated the prevalence of cancer.[37] The National Breast Cancer Survey reveals that while Blacks know as much about breast self-examinations (BSE) as do Whites, almost 25 percent of the Hispanics had never heard of BSE.[38] In a telephone survey in Illinois, Blacks were less aware than were non-minorities of specific cancer tests such as Pap smears, BSE, proctoscopy and prostate palpation.[39]

Improved care for minorities can result in survival rates comparable to White rates. In a Veterans Administration study in which patients received similar care, patient survival did not differ by race.[40] Furthermore, in a randomized trial in New York, racial differences in the 5-year survival rate from breast cancer were present among an unscreened control group but not among the women who received screening.[41] The results from these two studies demonstrate that racial disparities in cancer outcomes can be diminished by the provision of appropriate health care.

Although early detection and appropriate treatment for cancer can improve survival rates, these are not a substitute for cancer prevention. Therefore, cancer treatment should not overshadow the teaching and development of good health habits, improvements in the environment and improvements in access to preventive health care.

Conclusion

There is substantial excess cancer morbidity and mortality in the Black population. This excess appears to be related to a greater prevalence of cancer-related risk factors and to inadequate access to detection and treatment services. Cancer rates for other minority groups are low but may be on the increase. Among some groups with low overall rates, rates for specific sites are higher than the majority population. Native Americans who appear to have low incidence rates also have very poor survival rates. Understanding of culture-specific factors that may have led to the more favorable cancer rates among these minority groups should be pursued. Adequate, culturally sensitive prevention, detection and treatment services are necessary to reduce the incidence and increase survival among minority populations.

Adequate, culturally sensitive prevention, detection and treatment services are necessary to reduce the incidence and increase survival among minority populations.

Notes

1. Office of the State Registrar. *Cancer Incidence and Mortality Michigan 1985.* Lansing: Michigan Department of Public Health, 1987. Note that age-adjusted rates for the cancer reporting system use 1970 United States population as the standard population while age-adjusted death rates reported in the annual statistical publication of the Department, Michigan Health Statistics, use the 1940 United States population as the standard.

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15. Subcommittee on Cancer in Minorities. Native Americans, p. 29. *Report of the Secretary's Task Force on Black and Minority Health, Vol III: Cancer*, pp. 29-34. Washington: U.S. Department of Health and Human Services. January 1986.

16. Subcommittee on Black and Minority Health. *Report of the Secretary's Task Force on Black and Minority Health Vol III: Cancer*, p. 6. Washington: U.S. Department of Health and Human Services, January 1986.

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Chapter Five

CHEMICAL DEPENDENCY

The following chapter discusses the excess disease and mortality among minorities caused by alcohol and drug abuse. Tobacco use, which was included in the chemical dependency volume of *The Report of the Secretary's Task Force on Black and Minority Health*, is discussed in Chapter Sixteen of the current report.

Dependency on alcohol and drugs is having a major impact upon health both in the United States and in Michigan. For example, the National Institute on Alcohol Abuse and Alcoholism estimates that approximately one-half of all homicides are alcohol-related.[1] Illegal drug use is estimated to be a factor in 10 percent of all homicides,[2] and contributes to excess morbidity and mortality among minorities.[3] In the 1979 Surgeon General's Report, *Healthy People*, it is reported that 10 percent of all deaths are alcohol-related and that this figure may be even higher for minorities.[4] In Michigan, alcohol abuse, as reflected in the mortality rates for cirrhosis of the liver, contributed to 209 excess other than White deaths in 1985.

Alcohol Abuse

Alcohol abuse has a number of negative health consequences. Excessive drinking can lead to cirrhosis of the liver, stroke, hypertension[5] and an increase in accidental injury.[6] Alcohol consumption among pregnant women has been shown to lead to Fetal Alcohol Syndrome (FAS) in the offspring. FAS is characterized by growth retardation, abnormal facial and cranial features, and central nervous system abnormalities.[7] (See Chapter Seven on Low Birth Weight and Infant Mortality for further discussion).

Michigan and the United States

In 1985, the death rate from chronic liver disease and cirrhosis for males was 2.2 times higher than the rate for females in both Michigan and the United States. In Michigan, the age-adjusted mortality rate for deaths due to chronic liver disease and cirrhosis was 12.6 per 100,000 in 1985, as compared to the substantially lower U.S. rate of 9.6 per 100,000. The higher Michigan rate is consistent with evidence from a report on the risk behaviors of residents from 29 states during 1981-1983. This study revealed that 30.9 percent of Michigan respondents reported that they engaged in "acute heavy drinking."[8] In ten of the other states less than 20 percent of respondents engaged in such drinking and 12 states had less than 25 percent of respondents reporting acute drinking.[9]

More recent 1987 data reveal that the prevalence of acute heavy drinking has declined in Michigan to 22.5 percent.[10] While it is not yet known how Michigan currently ranks in this respect relative to other states, this progress is encouraging.

Minority Groups

Many sources reveal that minority groups experience higher rates of alcohol-related illnesses and deaths than Whites. Studies show that among women, abusive drinking is more likely to occur among Blacks than Whites.[11] Also, Native Americans are significantly more likely to be alcoholic than are Whites.[12] National data from 1979-1981 show that Blacks and Native Americans had much higher cirrhosis mortality rates than either Whites or Asian and Pacific Islanders. The national cirrhosis mortality rate for Blacks was nearly twice that of Whites (males: 29.4 vs. 15.4, females 13.3 vs. 6.9 per 100,000). For Native Americans, the rate was three to four times the White rate (males: 43.7 vs. 15.4, females 29.9 vs. 6.9).[13]

Black and other minority males were roughly twice as likely to have been hospitalized with a primary diagnosis relating to alcohol abuse.

The racial discrepancy in cirrhosis mortality rates was especially large for Michigan in 1984. For the U.S. as a whole in 1984, the other than White rate was 1.5 times higher than the White rate (14.3 vs. 9.3) while in Michigan the other than White rate was more than twice as great as the White rate (25.4 vs 10.0). As can be seen, the greater gap in cirrhosis rates by race in Michigan is a function of an elevated other than White rate rather than a lowered White rate. The rate for Michigan's other than White population was more than twice as great as the comparable national rate.[14]

Michigan hospital discharge data for 1985 reveal that Black and other minority males were roughly twice as likely to have been hospitalized with a primary diagnosis relating to alcohol abuse as White males (White: 351.0, Black: 753.0, other minority: 619.0 per 100,000 population).[15] Minority women were also more likely to be hospitalized for alcohol-related illnesses than were their White counterparts (White: 96.2, Black: 162.0, other minority: 242.0 per 100,000).

Blacks

In spite of the increased risk of death and illness from alcohol abuse among Blacks,[16] Blacks do not appear to be heavier drinkers than Whites. For example, a 1979 national survey reveals that Blacks are more likely to classify themselves as abstainers than are Whites (males: 30 percent v. 25 percent, females: 49 percent v. 39 percent).[17] The 1983 Michigan Blood Pressure Household Survey produced similar results with 31.5 percent of Blacks as compared to 18.5 percent of Whites reporting that they abstain from drinking. Furthermore, Michigan Blacks and Whites had similar percentages of heavy drinkers (Whites: 15.1 percent, Blacks: 13.8) and moderate drinkers (Whites: 23.9 percent, Blacks: 22.7) in the blood pressure survey. More recently, the 1987 Michigan Behavioral Risk Factor Survey revealed that 43.9 percent of Blacks as compared to 38.3 percent of Whites reported that they abstain from alcohol. As in the previous survey, similar proportions of Blacks and Whites in this study reported engaging in heavy drinking (Whites: 9.2, Blacks: 7.3).[18]

The fact that Blacks appear to be no more likely to drink excessively than Whites, in spite of their greater likelihood of suffering the ill effects of alcohol, may indicate that other negative environmental factors such as poverty, poor education, and poor nutrition have exacerbated the negative consequences of alcohol abuse.

Five of the ten major causes of death among Indians are related to alcohol.

Native Americans

The Indian Health Service reports that five of the ten major causes of death among Indians are related to alcohol: accidents, cirrhosis of the liver, alcoholism, suicide and homicide.[19] Based on age-adjusted rates, a national report reveals that the mortality rate from these alcohol-related causes of death is three times higher for Native Americans than for the population as a whole. The mortality rate for cirrhosis of the liver among Native Americans is particularly elevated in the younger age groups.[20]

The 1985 *Report of the Director's Indian Health Task Force* noted that alcoholism is "the most critical health problem among Michigan Indians."[21] The report commented that accidents, and chronic liver disease and cirrhosis—two causes of death that typically relate to alcohol use—are much greater among Michigan Indians than among the White Michigan population. Six percent of Indian crude deaths as compared to 1.5 percent for Whites are due to chronic liver disease and cirrhosis.[22] The higher death rate from chronic liver disease and cirrhosis is largely a result of a higher death rate among females. Specifically, the Indian/White crude death ratio for females is 2.3 and only 1.2 for males.[23]

Evidence does indicate that Indians are more likely to abuse alcohol than is the majority population. According to the Office of Substance Abuse Service, Indians are two to five time more likely to suffer from alcoholism than is the general population.[24] Furthermore, more than 70 percent of the treatment provided through the Indian Health Services is alcohol related.[25] In Michigan, Native Americans were

over-represented in 1986/87 hospital admissions for alcohol abuse with twice as many Native Americans being admitted as would be expected based upon their population in the State.[26]

Drug Abuse

History

There are many studies that have examined drug abuse among ethnic groups. National studies from the 1970's reveal that Whites were at least as likely to use all drugs, except heroin and cocaine, as were Blacks and other minorities.[27] While older Blacks were somewhat more likely to try heroin and cocaine than were other Whites, this racial difference was smaller among those born in the early 1950's. Native Americans were found to use opiates more often than Whites or Blacks.[28]

Current trends

The 1982 National Household Survey on Drug Abuse reveals that drug use within the household population is higher in urban than in non-urban areas. Given that minorities are more likely to live in urban areas than are Whites, one could infer that they are more likely to use drugs than Whites. Nevertheless, the national survey reveals that the prevalence of drug abuse is similar for Whites and minorities. Furthermore, minorities were more likely than Whites to report marijuana as the only illicit drug they use.[29]

66 percent of cocaine admissions, and 85 percent of statewide crack admissions to state-funded programs in Michigan are minority.

In Michigan, however, minorities may abuse drugs more than Whites. According to the Office of Substance Abuse Services, Blacks were admitted to substance abuse clinics for drug abuse at a rate of 1126.0 per 100,000 population, which is 623 percent greater than the White admittance rate of 180.6. American Indians and Hispanics were 65.8 and 30.2 percent more likely to be admitted for drug abuse than were Whites (American Indians: 299.6 Hispanics: 233.16 per 100,000 population). Asians were the least likely to be admitted for drug abuse at a rate of 47.5 per 100,000 population.

The problem of drug abuse for minorities is further indicated by the fact that 66 percent of cocaine admissions,[30] and 85 percent of statewide crack admissions to state-funded programs in Michigan are minority. Cocaine use is particularly common among minority males with 1 out of 82 residents age 15 to 54 admitted for this problem as compared to 1 out of 237 minority females in this age group.[31] In the Detroit area, 80 percent of cocaine admissions are Black and 88 percent of crack admissions are Black.[32] Furthermore, the number of Blacks admitted to treatment in southeast Michigan

for cocaine abuse has exceeded the number of Black admissions for alcohol abuse.[33]

Data from 1985 Michigan hospital discharges for drug-related illnesses also illustrate the problem of drug abuse among Blacks. The discharge rate for Black males was 317 per 100,000 population in contrast to 64.2 and 60.8 for White and non-Black minority males, respectively. The pattern was similar for women, with a rate of 153 per 100,000 population for Blacks compared to 43.5 and 49.8 for White and non-Black minority females, respectively.[34]

Michigan hospital discharges for drug-related illnesses for Black males were 317 per 100,000 population in contrast to 64.2 and 60.8 for White and non-Black minority males.

Drug abuse may not only be more prevalent among minorities but may also have greater health consequences for minorities than for Whites. For example, the Centers for Disease Control reports that nationally the incidence of AIDS among Blacks and Hispanics is 3 and 2.6 times higher, respectively, than among Whites. When homosexual and bisexual men with AIDS are excluded, the incidence for Blacks and Hispanics is 12.0 and 9.3 times greater, respectively, than that for Whites. Researchers and health officials believe that this result is due to the greater likelihood of needle sharing among minority than non-minority intravenous drug users.[35]

Michigan findings for drug abuse are similar. In 1988, 43.8 percent of the 518 AIDS cases were Black while only 13.9 percent of the Michigan population is Black. Additionally, 48 percent of all Blacks with AIDS reported intravenous drug use, while only 8 percent of White AIDS cases were in this group. Eighty-two percent of the AIDS victims who were intravenous drug users were Black.[36]

Causes of Substance Abuse

Substances such as alcohol and drugs can alter perceptions and provide an escape from reality. Minority individuals, many of whom live in very unpleasant realities, may perceive abuse of these substances as one of the few alternatives to "improve" their circumstances. Unfortunately, once an individual becomes addicted his or her life deteriorates further including poorer health, decreased ability to perform daily tasks, and the continuing burden of the cost of the drugs or alcohol.

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14. The minority to White ratio does not vary across sex for either the Michigan or United States populations.

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Chapter Six

VIOLENCE AND INJURY

In the 1985 report by the Committee on Trauma Research, William Foege, chair of the committee characterized injury as the "principal public health problem in America today."[1] The problem of injury includes deaths due to homicide, suicide, and unintentional injuries and morbidity due to non-fatal assaults, suicides, and unintentional injuries. The problem of injury has a disproportionate impact on the young, on minorities, and on the poor.

On a national basis, excess deaths due to homicides occur among Blacks, Hispanic males, and Native Americans. Native Americans and older Chinese women have excess deaths due to suicide. Deaths due to unintentional injuries are elevated in Native Americans. In Michigan, there are excess homicide deaths among Blacks and excess unintentional injury deaths among Black males and Native Americans. The suicide mortality rate for the other than White population is not higher than that for Whites in Michigan.

Intentional Injury

Mortality

The homicide death rate for Blacks is about a 12 times higher than that for Whites. The vast majority of the 796 Black homicide deaths in 1986 were excess deaths, deaths that would not have occurred if the rate for the Black population was the same as that for the White population.

TABLE 6-1

Number of Homicide Deaths by Age, Race, and Sex, Michigan Residents, 1986

AGE	ALL RACES TOTAL	M	F	WHITE TOTAL	M	F	BLACK TOTAL	M	F
Under 1	14	8	6	7	5	2	7	3	4
1 to 4	16	10	6	5	3	2	11	7	4
5 to 9	4	0	4	2	0	2	2	0	2
10 to 14	16	11	5	4	2	2	12	9	3
15 to 19	141	119	22	27	22	5	114	97	17
20 to 24	203	169	34	50	38	12	152	130	22
25 to 29	164	141	23	40	31	9	124	110	14
30 to 34	153	123	30	28	21	7	125	102	23
35 to 39	118	88	30	31	26	5	87	62	25
40 to 44	79	52	27	32	18	14	47	34	13
45 to 49	40	37	3	14	12	2	25	24	1
50 to 54	41	31	10	12	7	5	29	24	5
55 to 59	37	29	8	16	9	7	21	20	1
60 to 64	31	24	7	15	10	5	16	14	2
65 to 69	18	12	6	6	3	3	12	9	3
70 to 74	15	9	6	5	0	5	9	8	1
75 to 79	10	7	3	8	5	3	2	2	0
80 to 84	6	3	3	5	3	2	1	0	1
Over 85	4	1	3	4	1	3	0	0	0
Unknown	5	5	0	4	4	0	0	0	0
Total	1115	879	236	315	220	95	796	665	141

Races other than White and Black shown in total column only

TABLE 6-2

Number of Years of Potential Life Lost (YPLL*), Black Males and Black Females, Michigan Residents, 1985.

CAUSE	BLACK MALES	BLACK FEMALES
Homicides	19,041	4,445
Unintentional Injuries	9,626	3,712
Diseases of the Heart	9,564	5,040
Cancer	5,406	5,792
Prematurity	4,637	2,838
Cirrhosis/Chronic Liver Disease	3,610	1,625
Congenital	3,008	1,696
SIDS	2,938	1,806
Suicide	2,909	372
Cerebrovascular Disease	1,800	1,552
Pneumonia & Influenza	720	947
Chronic Obstructive Pulmonary Disease	599	641
Diabetes	540	605
Other causes	20,547	13,585
All Causes	**84,945**	**44,656**

TABLE 6-3

Rates of Years of Potential Life Lost (YPLL*) by Race/Sex Group and Black/White Risk Ratio, Selected Causes, Michigan Residents, 1985.

CAUSE	MALES BLACK	WHITE	RISK RATIO	FEMALES BLACK	WHITE	RISK RATIO
Homicides	34.1	2.1	16.2	7.2	1.0	7.2
Cirrhosis/Chronic Liver Disease	6.5	1.4	4.6	2.6	0.6	4.3
Prematurity	8.3	2.3	3.6	4.6	1.6	2.9
Cerebrovascular Disease	3.2	1.0	3.2	2.5	0.9	2.8
SIDS	5.3	2.0	2.7	2.9	1.1	2.6
Pneumonia & Influenza	1.3	0.6	2.2	1.5	0.4	3.8
Chronic Obstruct. Pulmon. Disease	1.1	0.6	1.8	1.0	0.5	2.0
Diabetes	1.0	0.6	1.7	1.0	0.4	2.5
Congenital	5.4	3.4	1.6	2.8	2.7	1.0
Diseases of the Heart	17.1	10.7	1.6	8.2	4.0	2.1
Unintentional Injuries	17.2	14.4	1.2	6.0	5.1	1.2
Cancer	9.7	9.0	1.1	9.4	8.8	1.1
Suicide	5.2	5.4	1.0	0.6	1.1	0.5

* YPLL before age 65 per 1000 persons less than 65 years

Of the nearly 800 Black homicide victims in 1986, over 500 were under age 35. The problem is not confined to youth, however. The number of Black homicide deaths rises rapidly during the teens but remains high through the age 40-44 group (Table 6-1).

Because violence has a disproportionate impact on younger people, the Years of Potential Life Lost (YPLL) statistic dramatizes the impact of the problem of violence. In 1985, there were 19,041 years of life lost prior to age 65 by Michigan Black males because of homicide (Table 6-2). This figure represented 22 percent of the total years of life lost before age 65 by Black males as a result of all causes of death and was about equal to the combined total of the next two causes, unintentional injuries and heart disease. For Black females, homicide was the third leading cause with 4445 years of life lost before age 65, about 10 percent of the total for the group. The years of life lost rate was 16 times higher for Black males than for White males and the Black female rate was 7 times greater than the rate for White females (Table 6-3).

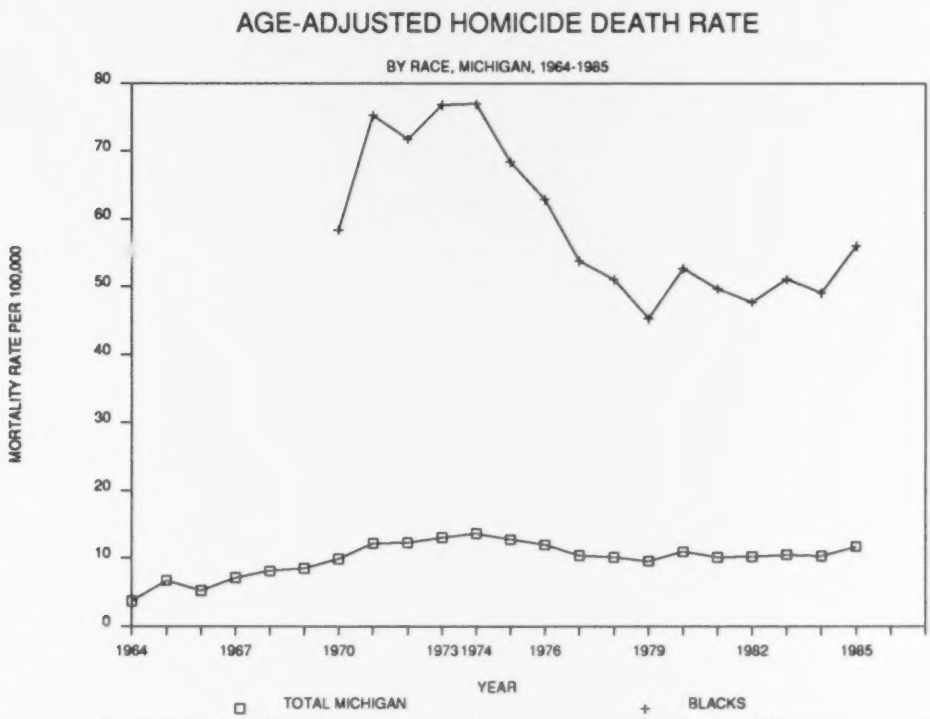
Historical Background

It is helpful to recall that the problem of violence, and particularly violence against racial minorities, has a long history in the United States. The wars waged to displace Native Americans and Mexicans from their lands; the violence of the slave trade, of slavery, and of the post-slavery Jim Crow era; and the violence that accompanied efforts to exclude Asians from the United States all had a significant impact on the lives of minorities in this country. Violence against minorities was instrumental in the institutionalization of racism.

Economic, social, and legal discrimination have all been features of institutionalized racism. Accompanying and reinforcing these institutional mechanisms of racial oppression were racist ideas: the idea that racial minorities were inferior physically and morally and that the life of a Native American, an Indian, a Black person, or an Asian was not worth the same as that of a White person. Although the minority population and other supporters of equality have succeeded in enacting many measures to reduce or eliminate discrimination, institutionalized racism has changed in form but has not been eradicated. A wide chasm continues to exist between Whites and minorities in property ownership, income, employment rates, educational attainment, and representation in political, administrative, and managerial roles. The impact of this continuing oppression on the health status of minorities has been vast.

Politically motivated violence against racial minorities is not a thing of the past. There have been instances of this type of violence against Blacks, Arabs, and Asian Americans in recent years. In 1982, Vincent Chin, a Chinese American, was beaten to death in Detroit by two White men who thought him Japanese and blamed him for layoffs in the automobile industry. In a number of states, there have been attacks on immigrants from Southeast Asia.[2]

FIGURE 6-1



Recent Trends in Homicide

Homicide rates in Michigan were relatively stable from 1934 thorough 1964. The rate rose from 3.7 per 100,000 population in 1964 to a century high mark of 13.6 in 1974 (Figure 6-1). The Black rate followed a similar pattern, peaking at 76.9. During the next three years, the general homicide rate dropped by 24 percent and the Black rate dropped by 30 percent. These rates remained fairly stable through 1984. Substantial increases in the number and rate of homicides occurred in 1985 and again in 1986. The number of Black homicide deaths increased from 618 in 1984 to 709 in 1985 and then to 796 in 1986, the second highest number of Black homicide deaths in Michigan history.

Types of Homicide

Uniform Crime Reporting (UCR) system data compiled by the Michigan Department of State Police categorize homicides by the nature of the relationship between the assailant and victim. Although some discussions of homicides emphasize family violence, UCR data for 1986 indicate that 10.6 percent of homicides involved family members and an additional 1.6 percent involved intimates who were not members of the same family. Homicides in which the circumstances were unknown were 42.6 percent of the total while 30 percent of the cases involved an argument in which the nature of the relationship between the victim and assailant was not specified. Known felony-related homicides were 15.5 percent of the total.[3] The proportion of

homicides in which the circumstances were unknown has been rising and the proportion of felony-related homicides has also been rising. Rose has classified the unknown group as suspected felony-related cases. He and others have noted a general rise in non-conflict motivated homicides.[4] The rise in non-conflict related homicide is associated with an increase in robberies and illegal drug activity. Rose notes that underlying these trends is the economic decline of the nation's central cities.[5]

Geographic Distribution of Homicides

Homicides occur more often in cities than in suburban or rural areas and more often in large cities than in small cities. On a national basis, homicides are concentrated in the very largest cities in the country. Sixty percent of Michigan homicide deaths occurred in the city of Detroit as did 76 percent of Black homicide deaths. Although residents of Wayne County were at much greater risk than other Michigan residents, there were 363 homicide deaths elsewhere in Michigan including 152 Black deaths.

The estimated homicide rate[6] for Wayne County in 1986 was 34.6 per 100,000. The counties with the next highest rate were Genesee, which had a rate of 17.1, and Saginaw, which had a rate of 15.7. No other county had a double digit homicide rate. Like Detroit, the inner cities of Flint and Saginaw are older industrial areas which have experienced numerous plant closings and severe economic decline.

Alcohol Abuse and Drugs

The National Institute on Alcohol Abuse and Alcoholism has estimated that about one-half of all homicides in the United States are alcohol-related. The Secretary's Task Force Report on Black and Minority Health suggested that about 10 percent of homicides nationwide and more than 20 percent of homicides in large cities are associated with the use of illegal drugs.[7] The latter figure is based on a New York City Police Department analysis. A comparable estimate for Detroit is not available.

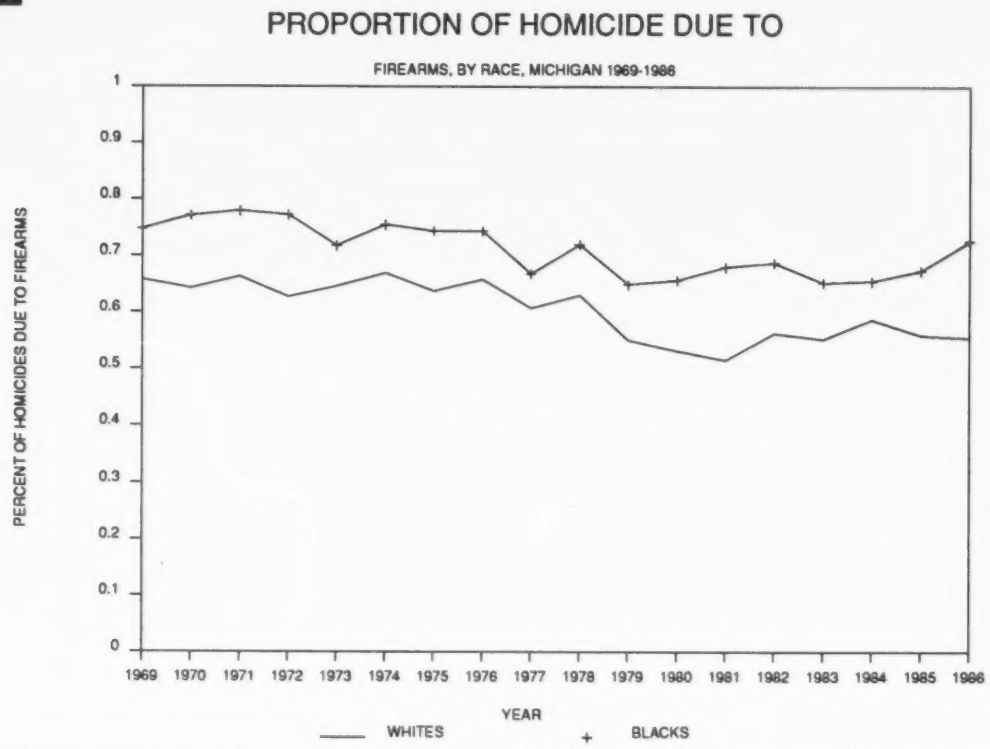
The Psychological Dimension of the Problem

The psychological dimensions of the problem of Black-on-Black homicide have been explored by Poussaint and Comer, two Black scholars, among others. Poussaint argues that "oppression has produced psychological scarring in many Blacks" and that "institutional racism . . . fosters a chronic lack of Black self-respect, predisposing many poor Blacks to behave self-destructively and with uncontrollable rage." Long-standing discrimination in the criminal justice system, moreover, conveys the message to the Black community that "Black life is cheap," Poussaint argues; this, too, makes resort to deadly violence less difficult.[8]

The Role of Guns

During the period between 1969 and 1986, a majority of homicides, White as well as Black, involved firearms or explosives. The proportion of homicide deaths which were gun-related was somewhat higher for Blacks than for Whites. For both groups, the mid-1970's

FIGURE 6-2



to early 1980's decline in the number of homicides was associated with a decline in the proportion of homicides which were gun-related. For Blacks, this proportion dropped from a peak of 78 percent in 1971 to 65 percent in 1979 and remained relatively stable over the next several years. The increase in the number of Black homicides in the past two years, however, is associated with a rise in the proportion of gun-related deaths to 73 percent in 1986 (Figure 6-2).

In a study of Detroit homicides during the period of rapidly rising rates (1962-1964), Franklin E. Zimring noted that police-reported robberies increased from about 4,200 to just over 20,000 while robbery killings increased from 15 to 155. He concluded that an increased availability of guns appeared to have made robbery relatively easier, increasing both the total number of robberies and the number of robbery related deaths.[9] In the past decade, there has been little change in the availability of guns and the number of robberies has remained high. In 1986, there were 16,241 police-reported robberies in Detroit.[10]

Morbidity

Many, if not most homicides, are preceded by patterns of non-fatal violence. The problem of intentional injury includes a large number of instances of violence such as assaults, spouse abuse, child abuse,

TABLE 6-4

Number of Hospital Discharges for Michigan Patients with Any Mention of Intentional Causes of Injury and Poisoning According to Sex and Race, 1985.

TYPE OF INJURY (external cause)	NUMBER OF DISCHARGES													
	TOTAL		WHITE MALE		WHITE FEMALE		BLACK MALE		BLACK FEMALE		OTHER MALE		OTHER FEMALE	
	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*
Intentional causes of injury and poisoning	16,883	18.6	5,125	13.6	4,798	12.2	4,205	70.4	1,864	27.9	164	31.2	79	14.1
Suicide & self-inflicted injury	6,789	7.5	1,994	5.3	3,394	8.6	382	6.4	662	9.9	37	7.0	45	8.0
Homicide & injury purposely inflicted by other persons	10,094	11.1	3,131	8.3	1,404	3.6	3,823	64.0	1,202	18.0	127	24.1	34	6.1

* Rate per 10,000 persons

and self-inflicted injury. In 1985 there were about 10,000 Michigan hospital discharges involving homicides and injuries intentionally inflicted on another person. Half of these discharges involved minority persons. The discharge rate for Black males was nearly eight times the White rate while that for Black females was five times the White female rate. The rates for other races (principally Native Americans and Asian and Pacific Islanders) were also elevated. The rate for other than White males was nearly three times the White male rate while that for other than White females was nearly 1.7 times higher than the White female rate. Although mortality data do not show a pattern of excess minority suicide deaths, the hospital discharge rates were higher for minorities than for Whites for suicide and self-inflicted injury (Table 6-4).

Domestic Violence

Each year in the United States, an estimated 2.9 million households are the scene of severe husband-wife violence. An estimated 6.5 million children are also the victims of severe violence inflicted by their parents. Exposure to severe and repeated violence in childhood appears to be an important precursor of subsequent violent behavior both later in childhood and as an adult. In many households, there are multiple victims.[11]

Although the issue of the relative frequency of family violence in different population sub-groups is not without controversy, the *Secretary's Task Force Report on Black and Minority Health* concludes that "the available data suggest that Black families may have the highest rates of child abuse and neglect, followed by Hispanics and Whites." Husband-wife violence also appears to be significantly greater among Blacks than among Whites.[12]

The Role of the Family

In a discussion of "Black Violence and Public Policy," James P. Comer argues that the family must be the focal point of efforts to address crime, violence, and other social problems.[13] Of central importance, according to Comer, is the child rearing function of the family:

> *When parents are able to meet basic family needs, identify with institutional leaders, and experience a sense of belonging, they are likely to be adequate child rearers and to promote the social, psychological, and moral development of their children to a level that enables them to cope as young people and adults and reduces*

the likelihood of crime and violence to a minimal and manageable level in society.

Comer cites the negative impact of slavery and post-Civil War economic discrimination on the ability of Black families to meet basic needs. Moreover, Blacks experienced exclusion from leadership positions in the institutions of politics, government, and education while leaders of these institutions "not only permitted violent and nonviolent intimidation and denial of Black rights and opportunities, but often promoted it."

In the face of the changing economy during the past two decades, the most traumatized families deteriorated. Children from these families often fail in school (unnecessarily, Comer believes) and then fail in life. In reaction to failure, some become disruptive and violent, others develop self-destructive habits such as alcoholism and drug abuse. The movement of children down these negative paths is reinforced by the models of violent and other anti-social behavior they see in relatives and neighbors who themselves have experienced failure.

The Economic Context

The underlying problem facing minority communities is the lack of good jobs and the absence of any prospects for obtaining them. In our culture, a secure good-paying job has long been the basis for self-respect among men and has become the norm among women. Individuals unable to support themselves lack the key ingredient necessary for personal self-esteem. Families unable to support themselves find it difficult or impossible to maintain their unity and establish the supportive and nurturing environment in which children can grow into secure and independent adulthood.

The underlying problem facing minority communities is the lack of good jobs.

Unintentional Injuries

Mortality

The age-adjusted death rate for unintentional injuries was about 10 percent higher for the other than White population than for the White population in 1985. During the 1970's and 1980's, the other than White male rate has been consistently higher than the White male rate while the other than White female rate has usually been above the comparable White rate.

The pattern in unintentional injury deaths is quite different for Whites and minorities. Although motor vehicle accidents were the most common type of unintentional injury for both White and other than White populations, a higher proportion of White deaths were

TABLE 6.5

Deaths Due to Accidents by Race and Type of Accident for Michigan Residents, 1984-1986

TYPE OF ACCIDENT	TOTAL*		WHITE		BLACK		AMERICAN INDIAN		ASIAN/PACIFIC	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Total	9,479	100.0%	8,161	100.0%	1251	100.0%	28	100.0%	36	100.0%
Motor Vehicle Accidents	5,042	53.2%	4,458	54.7%	547	43.7%	12	42.9%	20	57.1%
Accidental Falls	1,229	13.0%	1,098	13.5%	125	10.0%	3	10.7%	2	5.7%
Accidents Caused by Fire and Flames	632	6.7%	427	5.2%	199	15.9%	5	17.9%	1	2.9%
Accidental Drownings	381	4.0%	295	3.6%	78	6.2%	2	7.1%	5	14.3%
Accidental Poisonings	445	4.7%	381	4.7%	63	5.0%	1	3.6%	0	0.0%
Choking on Food or Other Object	333	3.5%	273	3.3%	59	4.7%	0	0.0%	1	2.9%
Accidents Caused by Handguns and Other Firearms	109	1.1%	84	1.0%	25	2.0%	0	0.0%	0	0.0%
Air and Space Transport Accidents	102	1.1%	101	1.2%	1	0.1%	0	0.0%	0	0.0%
Misadventures During Medical Care, Abnormal Reactions, and Late Complications	197	2.1%	175	2.1%	22	1.8%	0	0.0%	0	0.0%
Water Transport Accidents	132	1.4%	107	1.3%	13	1.0%	3	10.7%	3	8.6%
All Other Accidents	877	9.3%	752	9.2%	119	9.5%	2	7.1%	3	8.6%

* Deaths with unknown race included in total column only

in this category. The other than White population had a larger proportion of deaths in the categories of fires, drowning, and choking. (Table 6-5).

National data show Native Americans have excess deaths due to unintentional injuries. The *Report of the Director's Task Force on Indian Health* noted that the adjusted [14] crude death rate for American Indian deaths due to accidents during the years 1981-83 was substantially higher than the comparable White rate. In Michigan the number of American Indian unintentional injury deaths during the 1984-86 period dropped to 28 from the figure of 55 in the previous three year period. The rate did not appear to be elevated in the more recent period.

Morbidity

There were about 149,000 Michigan hospital discharges with a mention of unintentional injury in 1985 or 12 percent of all hospital discharges. About 22,000 of these discharges were for other than White persons. The overall rate was about the same for Whites (158.8 per 10,000) as for the other than White group (159.8 per 10,000). However, the overall parity was accounted for entirely by the fact that Black females had a lower rate than White females. All other minority rates were higher than the White rates.

Hospital discharges with any mention of a diagnosis of unintentional injury were relatively more common for Black males than for White males but relatively less common for Black females than for White females. The rates for other minorities (principally Native Americans and Asian and Pacific Islanders) were higher for both males and females than the comparable White rates. The rate for other minority males was 58 percent higher than the White rate; the rate for other minority females was nearly 20 percent higher than the White female rate. (Table 6-6).

TABLE 6-6

Number of Hospital Discharges for Michigan Patients with Any Mention of Unintentional Causes of Injury and Poisoning According to Sex and Race, 1985

TYPE OF INJURY (external cause)	NUMBER OF DISCHARGES													
	TOTAL		WHITE MALE		WHITE FEMALE		BLACK MALE		BLACK FEMALE		OTHER MALE		OTHER FEMALE	
	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*
Unintentional causes of injury and poisoning	148,997	163.9	63,118	167.3	59,397	150.7	10,555	176.8	9,008	134.8	1,389	263.9	1,008	179.6
Motor vehicle	16,753	18.4	8,460	22.4	5,754	14.6	964	16.1	834	12.5	204	38.8	68	12.1
Pedestrian	1,932	2.1	858	2.3	456	1.2	319	5.3	175	2.6	23	4.4	20	3.6
Pedal cycle	2,037	2.2	1,123	3.0	533	1.4	177	3.0	78	1.2	25	4.7	9	1.6
Other transport	3,038	3.3	1,951	5.2	804	2.0	99	1.7	34	0.5	32	6.1	5	0.9
Poisoning by drugs	2,300	2.5	787	2.1	957	2.4	224	3.8	249	3.7	8	1.5	10	1.8
Poisoning by alcohol	192	0.2	79	0.2	55	0.1	35	0.6	10	0.1	5	0.9	1	0.2
Poisoning by other substances	1,503	1.7	703	1.9	454	1.2	161	2.7	129	1.9	11	2.1	9	1.6
Falls	37,498	41.3	12,731	33.7	18,967	48.1	1,910	32.0	1,965	29.4	263	50.0	282	50.3
Fire and flames/hot substances	2,489	2.7	1,157	3.1	540	1.4	428	7.2	270	4.0	36	6.8	26	4.6
Drowning	88	0.1	50	0.1	28	0.1	5	0.1	3	0.0	2	0.4	0	0.0
Suffocation/foreign bodies	1,620	1.8	733	1.9	591	1.5	119	2.0	101	1.5	12	2.3	14	2.5
Cut/struck/machinery	10,424	11.5	6,602	17.5	1,634	4.1	1,238	20.7	473	7.1	136	25.8	34	6.1
Firearms/explosions	1,451	1.6	647	1.7	75	0.2	541	9.1	103	1.5	13	2.5	4	0.7
Abnormal reactions due to surgical/medical procedures	38,016	41.8	15,534	41.2	15,689	39.8	2,453	41.1	2,740	41.0	340	64.6	313	55.8
Adverse effects of drugs in therapeutic use	15,511	17.1	5,112	13.6	7,876	20.0	774	13.0	1,118	16.7	68	12.9	107	19.1
All other	14,145	15.6	6,591	17.5	4,984	12.6	1,108	18.6	726	10.9	211	40.1	106	18.9

* Rate per 10,000 persons

The unintentional injury discharge rate for other minority males was notably higher than the rate for White males in a number of categories; these included motor vehicle accidents, falls, machinery accidents, fires, and abnormal reactions to surgical or medical procedures. Rates for other minority females were elevated for abnormal reactions to surgical or medical procedures, fires, pedestrian accidents, and machinery accidents.

Although the overall unintentional injury rates for Blacks were similar to those for Whites, the frequency by type of injury differed. Black rates were higher for fires, firearm accidents, pedestrian accidents, and poisoning by drugs and by other substances.

Hospital discharge data indicate the wide scope of the problem of injury. Some types of unintentional injury such as fires may be largely due to problems in the physical environment. A number of unintentional injury hospitalizations are associated with factors similar to those involved in intentional injuries: alcohol and drug use and use of firearms.

A Generation in Danger—Hopelessness Among Minority Youth

A whole generation of youth is in danger. The symptoms of the problem are violence, drug and alcohol abuse, teenage pregnancy and dropping out of school. Underlying the disproportionate morbidity

and mortality and social problems experienced by minority youth lies the predicament of despair. Minority youth in Michigan see little chance of obtaining a good job. The good- paying jobs in manufacturing which once provided an avenue of opportunity for many in minority communities are disappearing as factories close. Businesses which provide professional and skilled technical jobs generally have located their operations far from minority communities. With the day-to-day reality of decayed communities with poor housing, the easy availability of drugs, the absence of jobs and the threat of violence, it is not surprising that many minority youth are despairing. Although many families are able to overcome these huge obstacles, nurture their children and guide them through these difficulties and enable them to survive with positive values and self-respect, these underlying problems must be solved if the many hundreds of thousands of minority families, youth, and children borne down by these difficulties are to have a decent future.

Notes

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2. U.S. Commission on Civil Rights. *Recent Activities Against Citizens and Residents of Asian Descent.* Clearinghouse Publication No. 88. Washington: U.S. Government Printing Office. 1986.

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4. Rose, H. M. Can We Substantially Lower Homicide Risk in the Nation's Larger Black Communities? *Report of the Secretary's Task Force on Black and Minority Health, Vol. V: Homicide, Suicide and Unintentional Injury,* pp. 196-202. Washington: U.S. Department of Health and Human Services, January, 1986.

5. Ibid.

6. These rates were estimated by using 1986 homicide deaths and 1985 population data.

7. Subcommittee on Homicide, Suicide and Unintentional Injuries. Factors Associated with Excess Deaths From Homicide, Suicide, and Unintentional Injury. In *Report of the Secretary's Task Force on Black and Minority Health, Vol. V: Homicide, Suicide and Unintentional Injury,* p.32. Washington: U.S. Department of Health and Human Services, January 1986.

8. Poussaint, A.F. Black-on-Black homicide: A psychological-political perspective. *Victimology* 8(3-4):161-169, 1983. Comer, J.P. Black Violence and Public Policy. In L.A. Curtis. (ed.). *American Violence and Public Policy,* pp. 63-86. New Haven: Yale University Press, 1985.

9. Zimring, F.E. Determinants of the Death Rate from Robbery: A Detroit Time Study. In H.M. Rose (ed.). *Lethal Aspects of Urban Violence,* pp. 31-50. Lexington, Mass.: Lexington Books, 1979.

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11. Subcommittee on Homicide, Suicide, and Unintentional Injuries. Strategies for Preventive Intervention. *Report of the Secretary's Task Force on Black and Minority Health, Vol V: Homicide, Suicide and Unintentional Injury,* p. 46. Washington: U.S. Department of Health and Human Services, January, 1986.

12. Ibid., Vol.V, p. 47.

13. Comer, J.P. Black Violence and Public Policy. In L.A. Curtis (ed.). *American Violence and Public Policy,* pp. 63-86. New Haven: Yale University Press, 1985.

14. Adjusted to take account of the estimate effect on death rates of discrepancies in reporting American Indian race on death certificates and census records.

Chapter Seven

LOW BIRTH WEIGHT AND INFANT MORTALITY

Background

The death of an infant is a tragic personal loss for the family and a social loss to the community as a whole. Health professionals have looked at the infant mortality rate as an indicator of the overall health status of a population. The infant mortality rate for minorities in the United States has historically been much higher than that for the White population.[1] There has been significant progress in lowering overall infant mortality rates from the rate of 157.1 per 1000 in 1900 to 11.4 in 1985 and 1986. Nevertheless, the rate for Michigan does not compare favorably with the United States rate and the U.S. rate does not compare favorably with those of other industrialized nations.

The greatest relative ten year decline in Michigan's infant mortality rate was the 1970-1980 reduction of 37 percent. The rate for minorities has also been generally declining, but the rate of decrease has been smaller than that observed for Whites. The rate of decline for Black infants has been particularly slow. As a result, the racial gap in infant mortality rates has been growing in Michigan. In 1970 the Black rate of 30.1 was 63 percent higher than the White rate of 18.5 but in 1986 the Black rate of 23.0 was 156 percent higher than the White rate of 9.0. Figure 7-1 graphically illustrates this growing discrepancy in infant mortality rates.

Because of problems with the misclassification of non-Black minorities to White on death records, data from a matched file of

FIGURE 7-1

Infant Mortality Rates by Race

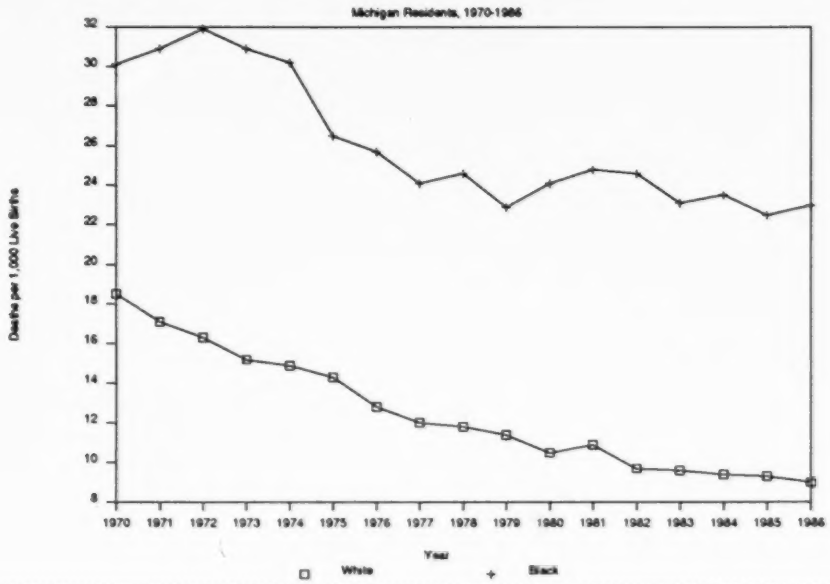

TABLE 7-1

Infant Deaths, Live Births, and Infant Death Rates by Race, Michigan Resident, Infants Born in 1984

INFANT RACE	INFANT DEATHS	LIVE BIRTHS	DEATH RATE
All Races	1,548	135,782	11.4
White	1,006	110,418	9.1
Black	518	23,005	22.5
American Indian	9	780	11.5
Other Races	15	1,508	9.9
Unknown	—	71	—

live births and infant deaths provides the best evidence of the experience of Native Americans and Asian and Pacific Islanders (Michigan vital records forms do not currently provide information on Hispanic status but should do so beginning in 1989).

The 1984 infant mortality rate for Michigan Indians was 11.5 per 1000, 26 percent above the White rate while the rate for other races (mostly Asian and Pacific Islanders) was 9.9, marginally higher than the White rate (Table 7-1). The rate for Black infants was 22.5, two and one half times larger than the White rate. It should be noted that the gap between the rate for Whites and Blacks might be greater if Hispanics and Arabs, groups which may be at high risk, were considered separately. National data for Hispanics indicate a favorable infant mortality rate but underregistration of deaths may be involved.[2]

A preliminary report of a Wayne County Health Department study of the Dearborn Arab community indicated that the infant mortality rate was quite high in that community.[3] For 242 Arab American women reporting a total of 701 live births since immigration to the United States, there was a cumulative total of 27 infant deaths. The estimated infant mortality rate was 38.5.

Many factors have been cited as playing a role in contributing to the disturbingly high Black infant mortality rate. Racial discrimination, poverty, poor nutrition, births by teenagers and by unmarried mothers, stress, smoking, substance abuse, inadequate prenatal care, lack of access to care, low birth weight and prematurity have all been mentioned. The birth certificate provides data on age and years of

education of the mother and father, prenatal care, birth weight, and gestation. It is helpful first to examine causes of death and age at death.

Age at Death and Causes of Death

Over two thirds of infant deaths are neonatal deaths, occurring within the first 28 days of life. Among the more frequent causes of death in this period are disorders relating to short gestation and low birth weight, congenital anomalies, respiratory distress syndrome and other respiratory disorders. The most important causes of post-neonatal deaths are sudden infant death syndrome, congenital anomalies, injuries, and respiratory conditions. The other than White mortality rate was about two and one half times the White rate for infants dying under 28 days and twice as high for infants dying between 28 days and one year.[4] The racial gap in infant mortality rates was small for congenital anomalies but nearly five to one for disorders related to short gestation and low birth weight; and more than two to one for respiratory conditions and sudden infant death syndrome (SIDS).[5] Many of the deaths due to infections and accidents should be preventable. The overriding problems were lowbirth weight and premature delivery, which were listed as the underlying cause in many cases and are often factors in deaths due to respiratory disorders.

Low Birth Weight

Low birth weight is a major factor in infant mortality in the United States. Most infant deaths occur during the first four weeks of life and are a consequence of inadequate fetal growth.[6] Low birth weight, defined as births under 2500 grams (about 5.5 pounds), was a factor in 60 percent of White infant deaths and 76 percent of other than White infant deaths for Michigan infants born in 1984 (Table 7-2). In 1986, the Michigan low birth weight ratio (the number of low weight live births per 1000 total live births) was 140.0 for Black infants, more than two and one half times the White ratio of 54.3. The low birth weight ratios for American Indians and for Asian and Pacific Islanders were similar to that for Whites (Table 7-3).

The relative gap in the Black/White prevalence of the problem of low birth weight was even greater when the very low birth weight subgroup (those born at 1500 grams or less) was examined. One percent of White infants in contrast to 3.1 percent of other than White infants were born at very low birth weight in 1984. Over 40 percent of infants born at this low weight do not live to their first birthday; the great majority of these infant deaths occur within the first 28 days of life.

TABLE 7-2

Number and Percent of Infant Deaths with Low Birth Weight by Race, Michigan Resident Infants Born in 1984

RACE	TOTAL INFANT DEATHS		BIRTHWEIGHT UNDER 2500 GRAMS	
	NUMBER	PERCENT	NUMBER	PERCENT
Total	1,548	100.0%	1,015	65.6%
White	1,006	100.0%	601	59.7%
All Other	542	100.0%	414	76.4%

TABLE 7-3

Number of Low Weight Live Births and Low Birth Weight Ratios by Race, Michigan Resident Infants Born in 1986

RACE	NUMBER	RATIO
All Races	9,537	69.3
White	6,038	54.3
Black	3,372	140.0

TABLE 7-3

Number of Live Births and Percent of Total Live Births by Race Born to Mothers Under Age 20, Michigan Residents, Selected Years 1970-1986

YEAR	ALL RACES*		WHITE		BLACK		AMERICAN INDIAN		ASIAN/PACIFIC	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
1970	30,283	17.6%	21,668	15.1%	8,468	31.5%	78	26.1%	10	2.3%
1975	24,972	18.6%	17,381	15.8%	7,446	32.1%	100	34.0%	16	3.1%
1980	20,331	14.0%	14,190	11.9%	5,966	24.7%	113	23.5%	45	3.7%
1981	18,697	13.3%	13,056	11.3%	5,443	24.0%	127	24.1%	50	4.0%
1982	17,663	12.8%	12,236	10.7%	5,244	23.5%	117	24.0%	53	4.3%
1983	16,917	12.7%	11,484	10.5%	5,241	23.9%	111	22.7%	57	4.9%
1984	16,783	12.4%	11,075	10.0%	5,486	23.8%	156	19.9%	59	4.0%
1985	16,631	12.0%	11,053	9.8%	5,383	23.8%	130	17.4%	49	3.3%
1986	16,871	12.3%	10,843	9.8%	5,810	24.1%	147	19.5%	56	3.5%

* Other and unknown race included in total column only.

Nearly two thirds of all other than White infant deaths of infants born in 1984 were born at very low weight. If the proportion of other than White births under 1501 grams were reduced to that for White infants, about 80 percent of the excess in Black infant deaths would be eliminated.

Teenage Pregnancy

More than one million teenagers in the United States become pregnant each year and approximately half of them give birth.[7] Most teenage pregnancies are unintended and the teenager is seldom prepared for the responsibility of parenting. Birth rates for United States teenagers are several times higher than for their counterparts in Europe and Canada. United States teens are much less likely to make regular and effective use of contraceptives.[8]

Teenage pregnancy is more common among Blacks and Native Americans than among Whites in Michigan. Although data from Michigan birth records are not yet available on Arab Americans, recent surveys indicate that Arab American females marry and begin child bearing at an early age.[9] About sixty percent of the births reported by Arab American women respondents in the Dearborn survey cited above occurred when the respondents were teenagers.[10]

The percentage of live births in which the mother was a teenager declined for Blacks, Native Americans, and Whites between 1975 and 1980 in Michigan, but in the 1980s this figure has continued to decline only for Whites and Native Americans. Twenty-four percent of all Michigan Black infants had teenage mothers in 1986 compared to 9.8 percent of White infants and 19.5 percent of Native American infants (Table 7-4).

There are several problems related to teenage pregnancy. Teenage mothers are often forced to leave school and lack the ability to provide financial support for their children. Most often they are forced to depend on their own families or public assistance. An early pregnancy also has psychological effects on the teenager. Depres-

sion and withdrawal are two common symptoms. As a result the teenage mother is often not psychologically available to the infant.

The poor teenager is more likely to become a teen parent than a teen who is not poor. The teenager who is most vulnerable to early parenthood is the one who is already poor, already behind in school, and is frustrated at his or her seemingly limited prospects for the future.[11] As would be expected, the number of years of education completed by teenage mothers is significantly less than that for older mothers. In 1985, 87 percent of Michigan mothers age 20 or older had completed high school compared with only 37 percent of mothers who were under 20 years old.[12] Childbearing tends to decrease the likelihood that the teen mother will complete her high school education.

There has been increasing attention in recent years to the role of young fathers in teenage pregnancies. Data on the impact of teenage pregnancy on adolescent fathers is limited but adolescent pregnancy programs have begun to direct some attention to males. There have been programmatic initiatives directed at males emphasizing prevention of pregnancy, vocational education, and counseling.[13]

Teenage mothers were more likely than older mothers to have fewer than five prenatal visits and to have inadequate prenatal care. Black, Native American, and Asian/Pacific teenagers were especially likely to have fewer than five visits or inadequate care (Table 7-5 and 7-6).

The low birth weight ratio has been higher for Black teens than for White teens in Michigan. Older mothers of Black infants also have had a high low birth weight ratio, however, and in the last two years, the low birth weight ratio has been somewhat higher for mothers older than 20 than for those younger than 20. The infant mortality rate, on the other hand, was elevated for teenage mothers of other than White infants born in 1984. The rate was 24.0 for teenage mothers compared with 21.4 for older mothers. Those giving birth before age 15 were at especially high risk; the infant mortality rate associated with those other than White births was 39.5.

TABLE 7-5

Number of Live Births and Percent of Total Live Births by Age and Race for Women with Fewer than Five Prenatal Visits Michigan Residents, 1986

RACE	TOTAL* NUMBER	%	UNDER AGE 20 NUMBER	%	20 AND OLDER NUMBER	%
All Races	4,451	3.2%	1,293	7.7%	3,156	2.6%
White	2,598	2.3%	651	6.0%	1,945	1.9%
Black	1,738	7.2%	613	10.6%	1,125	6.2%
American Indian	52	6.9%	17	11.6%	35	5.8%
Asian/Pacific	54	3.4%	8	14.5%	46	3.0%

TABLE 7-6

Number of Live Births and Percent of Total Live Births by Age and Race for Women with Inadequate Prenatal Care* Michigan Residents, 1986

RACE	TOTAL** NUMBER	%	UNDER AGE 20 NUMBER	%	AGE 20 AND OLDER NUMBER	%
All Races	8,138	5.9%	2,109	12.5%	6,025	5.0%
White	5,641	5.1%	1,217	11.2%	4,420	4.4%
Black	2,305	9.6%	850	14.6%	1,455	8.0%
American Indian	79	10.5%	24	16.3%	55	9.1%
Asian/Pacific	99	6.3%	13	23.6%	86	5.7%

*Inadequate prenatal care defined by Kessner's Index

Marital Status

There is no item on marital status on the birth certificate in Michigan. Legislation in 1978 removed the term "illegitimate" from the birth record. Societal attitudes have indeed changed so that children whose parents are not married are no longer stigmatized as they once were. Single parent families however, are much more likely to be poor and children in these families are at higher risk for a variety of poor health outcomes.

Michigan birth records provide data on both the father and mother. A majority of infants born to teenagers of all races had only one

TABLE 7-7

Number of Live Births and Percent of Total Live Births by Age and Race for Infants with Only One Named Parent on the Birth Record Michigan Residents, 1986.

RACE	TOTAL* NUMBER	%	UNDER AGE 20 NUMBER	%	AGE 20 AND OLDER NUMBER	%
All Races	26,515	19.3%	9,860	58.4%	16,649	13.8%
White	12,421	11.2%	4,839	44.6%	7,578	7.6%
Black	13,849	57.5%	4,924	84.8%	8,923	48.8%
American Indian	157	20.8%	65	44.2%	92	15.2%
Asian/Pacific	54	3.4%	21	38.2%	33	2.1%

*Other Races and Unknowns included in Total column only

Good prenatal care can make the difference in the outcome of a pregnancy, particularly if the mother is a high risk patient.

parent named on the birth record. Overall, 11 percent of White infants, 58 percent of Black infants, 21 percent of Native American infants, and 3 percent of Asian and Pacific Islander infants had only one parent named on the birth certificate (Table 7-7). The high proportion of Black infants with a single named parent reflects the relatively high prevalence of this phenomenon at all ages.

Prenatal Care

Good prenatal care can make the difference in the outcome of a pregnancy, particularly if the mother is a high risk patient. Care should begin during the first trimester and there should be regular visits—monthly during the first and second trimester, biweekly during the seventh and eighth months, and weekly during the ninth month. The quality of care is of great importance, to be sure, but this is much more difficult to measure than is the number of prenatal visits or the month in which care began.

Although considerable progress had been achieved in reducing the number of mothers in the highest risk group, those who receive no prenatal care at all, there was a considerable jump in this group in 1986. Overall, the number of mothers with no prenatal care rose from 865 in 1985 to 1,195 in 1986. There was a 26 percent increase for mothers of White infants and a 46 percent rise for mothers of other than White infants. Mothers of Black infants were more than four times as likely to have no prenatal care as were mothers of White infants.

Mothers of American Indian infants had the lowest average number of prenatal visits (10.2) compared with 11.2 for Blacks and 11.7 for Whites. Mothers of Black and American Indian infants were more likely to have between one and four prenatal visits and between five and nine prenatal visits than was the case for mothers of White infants. Conversely, mothers of White infants were more likely to be have ten or more parental visits.

Mothers with fewer than ten prenatal visits were more likely to have poor outcomes, and this differential in outcome was especially marked for those with fewer than five visits. The infant mortality rate for other than White infants born in 1984 was 152.2 for those whose mothers had no prenatal care, twenty six times the rate of 5.8 observed for infants of other than White mothers with fifteen to nineteen prenatal visits. The rate associated with mothers who had 1-4 prenatal visits was eighteen times the low rate, while the rate associated with mothers who had 5-9 visits was nearly five times the low rate. Rates for White infants showed a similar variation with the number of prenatal visits. Assuming the same infant mortality rates for each prenatal visit category observed in 1984, if mothers of other than White infants had had a similar number of prenatal visits as mothers of White infants, then the racial gap in infant mortality rates would have been reduced by one half.

Kessner's Index

It is reasonable to conclude that the relationship between lower infant mortality rates and higher numbers of prenatal visits is due at least in part to the results of good prenatal care. This relationship, however, also partly reflects the fact that women with premature terminations of their pregnancies have higher fetal and newborn death rates, and given the shorter period of pregnancy, they also tend to have fewer prenatal visits. Dr. D. W. Kessner devised an index to take account of length of gestation, number of visits, and month prenatal care began. Adequate prenatal care is defined as care which began during the first trimester and which included an average of at least one or two additional prenatal visits per month of gestation. Intermediate care is defined as care which began during the second trimester of the pregnancy with correspondingly fewer visits or which began during the first trimester but with a few less visits than would be appropriate for the length of gestation. Inadequate care is defined as care which began during the third trimester or no care was received or care began during the first or second trimester but fewer than five visits occurred.[14]

Blacks, Native Americans, and Asian and Pacific Islanders were all less likely than Whites to have adequate care as defined by Kessner's Index. Only 54.6 percent of American Indians had adequate care in 1986 compared with 62 percent for Blacks, 71.5 percent for Asian and Pacific Islanders, and 75 percent for Whites. The proportion with inadequate care was 10.5 percent for American Indians, 9.6 percent for Blacks, 6.3 percent for Asian and Pacific Islanders, and 5.1 percent for Whites. Data for infants born in 1984 showed that mothers with inadequate care had the highest infant mortality rate while mothers with adequate care had the lowest rate. These differences were less marked than was the case when just the number of prenatal visits was considered.

If mothers of other than White infants had had a similar number of prenatal visits as mothers of White infants, then the racial gap in infant mortality rates would have been reduced by one half.

Postneonatal Mortality and Postnatal Care

Nearly one third of infant deaths occur in the postneonatal period, that is after 28 days of life. The postneonatal mortality rate for other than White infants born in 1984 in Michigan was double that for White infants (5.8 per 1000 compared with 2.9 per 1000). As mentioned above, the major causes of these deaths are sudden infant death syndrome, congenital anomalies, injuries, and respiratory conditions. SIDS alone was responsible for 45 percent of postneonatal infant deaths in Michigan in 1986. Risk factors for SIDS include prematurity, a sibling who died of SIDS, a twin, a history of recent mild upper respiratory tract infection, inadequate prenatal care and race other than White. Nationally, the highest rates of SIDS deaths have been observed among Native Americans and Blacks.[15]

Postnatal care is vital for both the infant and the mother. Comprehensive follow-up care, including home visits for high-risk infants, is needed.

Although low birth weight infants are at relatively greater risk during the postneonatal period than are infants born at normal weight, the latter constituted 71 percent of infant deaths during this period. The *Report of the Secretary's Task Force on Black and Minority Health* cites health behavior in the family, socioeconomic conditions, and access to care as leading factors in postneonatal mortality.

Postnatal care is vital for both the infant and the mother. Comprehensive follow-up care, including home visits for high-risk infants, is needed.[16] In addition to physical care of the infant, postnatal programs also teach infant care and seek to develop parenting, life management, and coping skills.[17]

Smoking and Substance Abuse

Smoking, abuse of alcohol, and abuse of illegal drugs may all lead to adverse pregnancy outcomes. Infants of women who smoke during pregnancy weigh on the average 200 grams less at birth than infants of non-smoking mothers and are twice as likely to be born at low birth weight. Exposure to alcohol *in utero* can lead to fetal alcohol syndrome (FAS), a well-defined illness which is characterized by growth retardation, abnormal facial and cranial features, and central nervous system abnormalities.[18] Estimates of the number of pregnant women who drink range from 0.5 percent[19] to 16 percent.[20]

There is contradictory evidence on whether smoking and substance abuse are more common among Blacks than Whites during pregnancy.[21] There is some evidence indicating a high prevalence rate of fetal alcohol syndrome in some Native American tribes in the Southwest.[22] In Chapter Five, the critical importance of the problem of alcoholism among Native Americans was noted and, in particular, the fact that the rate of chronic liver disease and cirrhosis was more than twice as high among Native American women as among white women.

Geographic Distribution

The high Black infant mortality rates in Michigan are not confined to any one geographic area. The rate for Wayne County in 1986 was 23.4, just above the state rate of 23.0. Other counties with 200 or more Black births that had rates above the state rate included Genesee (27.5), Kalamazoo (29.4), Macomb (31.7), and Washtenaw (31.1). A few counties with substantial numbers of Black births, on the other hand, had rates well below the state rate for Blacks, including Berrien (17.2), Calhoun (18.2), and Muskegon (17.7). In only one county

with 200 or more Black births did the rate for Blacks approximate the statewide rate for Whites (Ingham with a rate of 8.1).

Michigan in Comparison with Other States

The Food Research and Action Center recently released a study comparing infant mortality and low birth weight rates across the nation. Michigan had the highest 1984 non-White infant mortality rate and tied with Pennsylvania for the highest non-White low birth weight ratio. The ratio between the non-White and White low birth weight ratios was higher in Michigan and the ratio between non-White and White infant mortality rates was the third highest in the nation. Among the nation's 55 largest cities, Detroit had the fifth highest non-White infant mortality rate and the highest non-White low birth weight ratio. Census data for 1980 showed Detroit ranking sixth in the percentage of the population at or below the poverty level (21.9 percent) while Michigan ranked 33rd in this regard (10.4 percent).[23]

The high infant mortality rate for Blacks in Michigan is associated with the severe economic circumstances facing the Black community.

Conclusion

The high infant mortality rate for Blacks in Michigan is associated with the severe economic circumstances facing the Black community. Rates for other minorities also appear to be somewhat elevated. Without adequate economic security, healthy pregnancies and successful parenting are difficult to achieve. High quality prenatal care and obstetrical services can make the critical difference but they have their maximum effectiveness when mothers and families can look forward to raising children with a sense of self confidence and optimism about the future.

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Section III

SPECIAL PROBLEMS

Chapter Eight

NUTRITION AND HUNGER

Nutrition

Poor nutritional practices are an important health risk factor. Illnesses that are influenced by diet include: diabetes, cancer, (particularly prostate, breast, colon, rectal, and esophageal), heart disease, and hypertension. Although definitive studies quantifying the impact of diet on disease have yet to be completed, some researchers have estimated that proper diet could reduce the risk of non-insulin-dependent diabetes by 50 percent,[1] cancer by 35 percent,[2] and heart disease by 21 percent.[3] Since incidence of these diseases are particularly high among minorities, it is important to examine the influence of nutrition on minority health status.

General Guidelines

Human nutritional requirements are extremely complex. Therefore, while much research has been done on the relation between health and nutrition, many of the dietary recommendations that have been made are tentative and subject to further examination. Consequently, dietary policies must be conservative so as to avoid making recommendations that would lead to nutritional risks.

One dietary guideline for which there is a general consensus is that most individuals should have a varied and moderate diet. It is important that one eats many kinds of foods, and does not over or under-emphasize any one kind. Following this advice makes it likely that one will receive sufficient quantities of most required nutrients.[4]

Diet and Disease

Excess Weight and Diet

Excess weight results when a person consumes more food energy than he or she expends. Overweight is defined as being more than 10 percent over ideal weight and obesity is defined as being overweight by 20 percent or more.[5] As discussed below, excess weight and obesity relate to many diseases such as diabetes, cancer, hypertension, heart disease, and stroke.

Individuals who are overweight or obese should lose weight gradually by consuming approximately 500-1000 calories less per day than their body uses. This goal can be achieved through either decreased food intake, increased physical activity or both. This process will result in a weight loss of one to two pounds per week. It is also important that the diet be well-balanced. In this way, the individual will receive proper nutrition and also learn good eating habits that can be continued after weight loss has been achieved.[6]

Diabetes and Diet

As discussed in Chapter Three, diabetes is a very important problem among minority groups. Non-insulin-dependent diabetes mellitus (NIDDM) is more prevalent among Blacks and Hispanics,[7] Native Americans[8] and Asians[9] than among Whites. Obesity, which is more common among minorities than among non-minorities, is a major cause of NIDDM.

Sound nutritional practices are extremely important in controlling both non-insulin-dependent and insulin-dependent (IDDM) diabetes. The major dietary goal for both forms of diabetes is to improve blood glucose and lipid levels.[10] As with any nutritional intervention, it is also important that the meal plan be adequate for the diabetic's stage in life and any coexisting medical conditions.[11] For individuals who develop obesity-associated NIDDM, calorie restriction and weight loss are also principal therapeutic goals.[12]

The food choices offered in diet plans should be acceptable to the minority member as well as affordable.

In presenting dietary materials, it is important that health professionals be sensitive to the health, cultural, economic and social circumstances of minority persons with diabetes. The food choices offered in diet plans should be acceptable to the minority member as well as affordable.[13] It is also important that educators present dietary materials that are appropriate for the educational and literacy levels of the patient.[14]

Cancer and Diet

The National Cancer Institute, the American Cancer Society and the National Academy of Sciences have recommended the following dietary guidelines for the prevention of cancer:

1. Achieve recommended weight. Several studies have indicated that overweight, particularly obesity, relates to several types of cancer. Sites found to be particularly affected are the en-

dometrium, gallbladder, cervix, kidney, stomach, colon, breast, and prostate.[15] It is important to note that being overweight is an important problem for many Blacks[16] and may in part be a factor in the high cancer rates among this group.

2. Reduce total fat intake. A high consumption of fat as found in foods like fried foods, saturated fats and fatty meats, has been shown to relate to cancer of the breast, colon[17] and prostate. It has been recommended that all Americans reduce fat consumption from 40 percent to 30 percent of their total caloric intake. This recommendation may be particularly important for many Blacks who, as studies reveal, prefer frying over other methods of food preparation.[18]

3. Increase fiber consumption. There is some indication that low consumption of fiber (in particular pentose polymers) as found in foods like whole grain cereals and bread and in many fruits and vegetables, can lead to cancer of the colon[19] and of the colorectal area[20].

4. Increase consumption of foods rich in vitamins A and C. Vitamin A from dark green and deep yellow fruits and vegetables may reduce a person's risk of larynx, esophageal and lung cancer. Foods with vitamin C may reduce the risk of cancer of the stomach and esophagus.

   Data from the Hispanic Health and Nutrition Examination Survey (HHANES) reveal that Hispanics have low serum vitamin A levels.[21] Interestingly, Hispanics do suffer from a higher incidence of stomach cancer than does the majority population, as was noted in Chapter Four. This dietary guideline is, therefore, particularly important for Hispanics.

5. Increase consumption of cruciferous vegetables. Cruciferous vegetables such as broccoli, cauliflower, brussels sprouts and kohlrabi may reduce the risk of gastrointestinal and respiratory tract cancers and even prevent chemically-induced cancers.

6. Reduce use of salt-cured, smoked and nitrite-cured foods. Smoked foods such as hams, sausage and fish contain cancer-causing tars that are similar to those found in cigarette smoke. There is some evidence that salt-cured and pickled foods are associated with stomach and esophageal cancer. Consumption of salt-cured and pickled foods is particularly common among Hispanic and some Asian groups and may relate to the high incidence of stomach cancer that these individuals experience.[22]

Consumption of salt-cured and pickled foods is particularly common among Hispanic and some Asian groups and may relate to the high incidence of stomach cancer.

Cerebrovascular and Cardiovascular Disease and Diet

Research indicates that the increased lipid levels in the blood found in atherosclerotic diseases may be brought on by the consumption of dietary fats in susceptible individuals.[23] The three basic forms of dietary fats are cholesterol and saturated and unsaturated fats. The

consumption of cholesterol and saturated fat tends to increase the level of blood lipids, while the consumption of polyunsaturated fats tends to decrease it.

Saturated fats are found in most animal protein, particularly beef, pork, and eggs, as well as in some vegetable fats like coconut and palm oil. Polyunsaturated fats are found in vegetable fats like corn, cottonseed and soy oils. All saturated fats are solid at room temperature while polyunsaturated fats are liquid. Cholesterol is contained in animal products only.

The National Institute of Health Consensus Conference recommended that cholesterol consumption be no more than 100 milligrams per 1,000 calories.[24] Among adults, total fat intake should be 30 percent or less of caloric intake and no more than one-third of this fat should be saturated fat. Examples of foods that are high in saturated fat are eggs, ice cream, whole milk, cheese, butter, red meat, poultry skins, and palm and coconut oil. Many baked goods and candies contain palm oil, coconut oil, and oils that are partially hydrogenated (a process that makes a fat more saturated). It is important that consumers be aware of the fat content of food so they can control their fat consumption. People can decrease fat intake by consuming foods that have reduced levels of cholesterol and saturated fat such as low-fat dairy products, skinned poultry, and lean cuts of red meat. People should also shift the type of fats they consume from saturated fats toward polyunsaturated fats (e.g., safflower, soy, corn and sunflower seed oils as well as fish that contain polyunsaturated oils).

Hypertension and Diet

Hypertension, a condition especially prevalent in the Black population, is another major risk factor for cerebrovascular and cardiovascular disease that can be controlled in part by diet. While many hypertensives are at or below desirable weight, overweight individuals are twice as likely to be hypertensive as are lean individuals.[25] For overweight hypertensives, weight loss is often an important part of controlling high blood pressure.

In many individuals, blood pressure has been found to be influenced by the amount of minerals in the diet.

In many individuals, blood pressure has been found to be influenced by the amount of minerals in the diet. For example, sodium increases blood pressure in some individuals. It is recommended that sodium intake be no greater than 1,100-3,300 milligrams per day. Foods that are typically high in sodium are table salt, salty snacks (e.g., potato chips, pretzels), soy sauce, frozen dinners, canned soups, dill pickles, and ham.

Research has also shown that in salt-sensitive individuals, an increased intake of calcium may reduce blood pressure. Calcium intake should be increased to the recommended level of 800 milligrams. This is the amount of calcium present in three 8 oz. glasses of milk.

Another mineral that may influence blood pressure in some individuals is potassium, which has been shown in some studies to decrease blood pressure. While the effectiveness of

potassium has not been conclusively proven, some blood pressure medications do increase one's need for potassium. Therefore, low sodium/high potassium diets are typically prescribed for hypertensives.[26] Interestingly, national data reveal that Blacks have a higher sodium to potassium ratio than do Whites, which may explain in part the higher prevalence of hypertension among Blacks.[27]

The Problem Of Hunger

The next-to-the-very-poorest as well as the poorest sectors are those who most suffer because of a lack of sufficient food.

Access to food for the poor has emerged as an issue in Michigan as well as the rest of the nation. It has been argued that programs created in the United States in the 1960s and 1970s had "virtually eliminated" the problem of hunger, but reductions in federal funding for state food programs in the 1980s have regenerated the problem in slightly different form.[28] Today the isolated elderly, poor children at school and pregnant women are the most affected by these federal cutbacks. Many of those who lack access to adequate food resources are minorities, but too little data are available to present a complete picture on who in Michigan suffers the most from hunger in the 1980s. What is clear is that the next-to-the-very-poorest as well as the poorest sectors are those who most suffer because of a lack of sufficient food. Following a 1984 statewide Fact-Finding Tour, the MDPH Nutrition and Advisory Commission concluded that "the need for food assistance has become a chronic problem, not an intermittent emergency, which stopgap measures in the private sector cannot handle."[29]

A hungry person is defined as someone who regularly is short of the nutrients necessary for growth and good health.[30] Experts agree that sufficient food is available globally,[31] nationally[32] and even locally[33] to meet the caloric needs of the population. According to these experts, the problem of hunger is not one of an educational deficit or an unwillingness to consume an adequate diet. They see the problem as one of people lacking sufficient resources to secure enough food to meet their nutritional needs.

Federal Programs

The Food Stamp Program issues coupons which can be used to purchase groceries, seeds and plants, or meals in specific circumstances. Those who are at or below 130% of the poverty level, with assets valued at less than $1500 are eligible; hence, those who are next-to-the-poorest often do not qualify for food stamps. Over the last three years, the number of households receiving food stamps declined from 441,385 to 364,873 for the first ten months of fiscal year 1987. Just over 50 percent of the households receiving food stamps were minority households. Eighty five to ninety percent of these minority

households were Black; from 3 to 7 percent were Hispanic, and the rest were American Indian and other minorities.[34]

The Senior Meals Program serves a limited number of meals at designated sites, or at home through the Meals on Wheels Program. Persons 60 years of age are eligible, as are their spouses; preference is given to people with low incomes. If clients are emotionally or physically unable to prepare their food, they are eligible for home delivery, regardless of income level. Fourteen percent of the congregate meals and 14 percent of the home-delivered meals statewide were provided to minority individuals in 1987.[35]

For the poor, elderly and those who live in rural areas, travel to congregate feeding sites can be difficult or impossible.

For the poor, elderly and those who live in rural areas, travel to congregate feeding sites can be difficult or impossible. Hence, home-delivered meals may be necessary for many people. Nevertheless, less funding is available for home-delivered meals than for congregate feeding.

The Women, Infants, Children Program (WIC) issues coupons to obtain formula and food products such as cereal, juice, milk, and cheese. Women who are pregnant, breast feeding or less than six months postpartum are eligible, as are children from birth to five years of age, if they are "at risk" for some kind of health or nutritional problem and at or below 185% of the poverty level. Since pregnant women sometimes qualify, but not their young children over five years of age, women with the barest resources may use the food to feed their children but not themselves, thus potentially depriving not only themselves but also their unborn fetus. Despite its limitations, the WIC Program has had a positive impact on the nutrition of the mothers and infants it serves.[36] Approximately 123,000 clients are enrolled currently in Michigan's WIC program.[37]

The Lunch and Breakfast Program provides a balanced meal for low income children at school, either free or at 40% of cost. Children in public schools are eligible, if their parents' income is at or below 130% of the poverty level; ineligible students are those in private schools where tuition exceeds $1500 per year. Whereas lunches are served at 3475 schools, breakfast is available at only 344 schools. Of the 672,000 students served lunches and the 35,000 children served breakfast, 38.9% receive free meals and 5.2% receive reduced-rate meals. The rest purchase meals at full price.[38] Prior to the 1981 budget cuts, 840,000 students were fed daily.[39] Unfortunately, there has been little effort to tabulate data on the minority status of the students receiving the various types of lunches.[40]

Administered by the Food and Nutrition Service (through the U.S. Department of Agriculture), the Summer Food Service Program provides a balanced meal during summer months at designated sites or summer camps. Children under 15 years of age are eligible. Sites are eligible if at least 50% of the children who are present are eligible for free or reduced-price school meals. Data on the number of minority children receiving meals through this program are unavailable.[41]

The Child Care Food Program (Michigan Department of Social Service) provides balanced meals to children in day care homes and day care centers. Children under 13 years of age in DSS-licensed day care homes are eligible, as are children in day care centers where at least 25% are from low income families.[42] Data on the percentage of minority children receiving meals through this program are unavailable.

Focus: HOPE runs special programs combining federal, state, and local funding to provide food supplements to the poor in the Tri-County area of metropolitan Detroit and, since the early 1980s, to the elderly (through the Food for Seniors Program). Seeking to develop self-sufficiency along with its distribution of food, the program provides vocational training in machine skills and small business management to a number of its food recipients. Many of these persons are minority, and the majority are younger adults. Increases in food pick-ups (not coupons) from Focus: HOPE are associated with improved nutrition; children who were considered at risk because of low body weight increased their overall body weight after participation in the program.[43] For those participating in the Food for Seniors program, 84.4% were female. Of the total, 61.1% were Black, 33.4% were White, 2.4% were Hispanic and the rest (3.1%) were from other racial or ethnic groups. More than one-half had less than a high school education, and many reported they were restricted in their ability to perform more than simple tasks around the home.[44]

The Growth in Emergency Feeding Programs

One indication of the growth of the problem of hunger in the 1980s is the expansion of non-federal programs which provide supplemental food on a daily basis, usually as an emergency measure. The sponsors of these programs in the state of Michigan include organizations such as churches, social services agencies, civic clubs and the Salvation Army. Ten local food banks that form the Food Bank Council of Michigan serve a total of 835 agencies throughout the state; combined, these agencies distributed over 21 million pounds of food in 1986.[45] Food banks and agencies not affiliated with the council distribute additional emergency food not included in the above total.

Emergency food programs in Michigan have noted an increase in the number of requests they have been receiving.

Emergency food programs in Michigan have noted an increase in the number of requests they have been receiving as well as a shift from single persons to more families who apply for food. For example, only 23.9% of the food distribution by the Ingham County Food Bank occurred from 1979-1982; the rest occurred over the most recent four years of its operation.[46] In 1985, 63% of those who used the Ingham County Food Bank were single-adult households with children.[47] A greater proportion of poor persons appear to be turning to emergency food programs for help than was the case a decade ago. In 1979, for example, roughly 12.9% of the population below the poverty line in Ingham County used the Ingham County Food

Bank; by 1986, that percentage had increased to 50.3%.[48] Groups working in the Detroit area note a similar trend. Surveyed by the Southeastern Michigan Food Coalition (S.E.M.F.C.O.), emergency food pantries in the Wayne County area report that they serve more than 2.3 million meals every month, although several years ago fewer than one million meals per month were served.[49] The Michigan Department of Public Health's Food and Nutrition Advisory Commission estimates that at least 3.5 million emergency meals are served each month in Michigan.[50] Many of the growing population of the homeless rely on food pantries and soup kitchens for their sustenance.

Although people are making use of their food stamps, many do not have enough to last them a full month.

Several emergency food programs note that they experience their greatest increase in food requests a few days prior to the day food stamps become available.[51] Although people are making use of their food stamps, many do not have enough to last them a full month. Food stamp recipients are a substantial proportion of emergency food recipients. In Ingham County, for example, 75% of the regular and 65% of the frequent users of the Food Bank also received food stamps.[52] Corresponding data of Food Bank users in the Detroit area who also use food stamps are unavailable.

Embedded with the question of a lack of food for the poor is the issue of nutritional status for those whose diets are less than adequate. General information from the Pediatric Nutrition Surveillance System indicates that minority children who are participating in such food supplement programs as WIC are more likely than non-minority children to be overweight before they are 24 months of age. During their third year, minority children were more likely to be underweight and shorter in stature than non-minority children.[53]

Conclusion

Federal food programs are reaching many people in need but not everyone in need is being served. The growth of emergency feeding programs is an indication that the level of federal aid being given is inadequate. A renewed societal effort needs to be made to tackle the increasing problems facing the poor, who are disproportionately minorities, women, and children.

The public health and medical communities and social service agencies need to foster sound nutritional practices both in the administration of food programs and the provision of guidance to high risk populations. Minority clients and patients need to be given the most up-to-date nutritional information and need advice that takes cognizance of cultural traditions and choices. Modification of dietary practices to achieve such goals as a reduction in obesity, although difficult to achieve, would have a significant impact on the health status of minority populations.

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Chapter Nine

ENVIRONMENTAL HAZARDS

A number of environmental hazards have a greater impact on members of minority communities than on the general population. Minority health status appears to be adversely affected by substandard housing, rodent infestations, lead poisoning, asbestos, and pesticides. Improving the physical environment has been a historic public health objective, but resources to tackle these hazards have been limited in recent years.

Housing

The quality of housing has a significant effect on health status. Estimates indicate that as many as 17 percent of Michigan dwelling units today are substandard. An appreciable amount of the population live under conditions that are undesirable from a social, hygienic, and safety viewpoint. The health problems faced by the homeless, whose numbers are growing, are multiple.

Health problems associated with housing include environmental hazards, communicable disease, and accidents. Among environmental hazards related to housing are infestations of rodents; hazards resulting from various kinds of toxic substances such as asbestos and lead; improperly vented heating equipment which results in the accumulation of carbon monoxide; indoor air pollutants such as formaldehyde, nitrogen dioxide gases, and radon; and problems related to water supply.

There is a direct relationship between the quality of housing and the spread of communicable diseases and other illnesses

among the housing occupants. Providing adequate protection from the elements, a safe water supply, proper waste disposal, facilities for the storage and preparation of food, general sanitation, lighting, and ventilation reduces the potential for the spread of illnesses and communicable disease.[1]

The risk of physical injury is also related to housing. Examples of such injuries include those caused by fires (often due to inadequate heating or electrical wiring), falls associated with unsafe stairs, pathways, or recreational equipment, and suffocation in abandoned home appliances. The home has been found to be the second most common place for occurrence of accidents.[2]

Abandoned housing constitutes a significant environmental hazard in many urban communities. Abandoned housing may contribute to rodent infestations and other sanitation problems. Also there is the risk of injury to children playing in such housing. In addition, abandoned housing may be used for illegal activities harmful to the community. In economically depressed communities, maintaining homes in good repair is often difficult. Owners of dilapidated housing that requires rehabilitation at a cost greater than one-half of the value of the original structure are not allowed a building permit in many parts of the state.[3]

Low income status and discrimination affect the quality of housing available to members of minority groups. At the time of the 1980 Census, more than one-third of Blacks, Native Americans, and Hispanics in Michigan resided in structures built prior to 1939 (Table 9-1). Older structures generally are more costly to maintain than newer ones and have more environmental problems associated with them such as the presence of lead-based paint. Minorities are more likely to reside in housing with inadequate sanitation facilities. According to the 1980 Census, 2.5 percent of Hispanics in Michigan and 1.9 percent of Blacks lived in structures without complete plumbing. The comparable figure for Whites was 1.1 percent (Table 9-2).

Another measure of housing quality is the number of people per room in the house. When a housing unit has more than 1.01 persons per room, it is defined as crowded. Higher proportions of minority populations resided in crowded housing in 1980 than was the case for Whites. The rate was particularly high for Vietnamese: 44.2 percent of owner occupied homes and 38.8 percent of renter occupied homes were crowded. The comparable figures for Whites were below 3 percent.[4]

The housing problems facing low income households across the nation appear to have increased in recent years. Between 1981 and 1987, gross rents have risen 14 percent faster than prices. The total number of units renting for less than $300 a month declined by nearly one million units between 1974 and 1983. The number of persons who have become homeless has increased dramatically. Single parent families in 1987 spent 58.4 percent of their incomes on rent, up from 34.9 percent in 1974.[5]

TABLE 9-1

Percentage of Persons Living in Structures Built before 1939 by Race or Ethnicity, Michigan, 1980

RACE/ETHNICITY	PERCENTAGE
White	26%
Black	38%
Native American	35%
Asian/Pacific Islander	15%
Hispanic	34%

Source: U.S. Bureau of the Census. 1980 Census of Housing Units, Vol 1, Characteristics of Housing Units, Chapter A, General Housing Characteristics, Part 24, Michigan.

TABLE 9-2

Percentage of Persons in Structures without Complete Plumbing by Race or Ethnicity, Michigan, 1980

RACE/ETHNICITY	PERCENTAGE
White	1.1%
Black	1.9%
Hispanic	2.5%

Source: U.S. Bureau of the Census. 1980 Census of Housing Units, Vol 1, Characteristics of Housing Units, Chapter A, General Housing Characteristics, Part 24, Michigan.

The effect of housing sanitation on health status has long been known; much of the early state-initiated legislation related to housing in Michigan was concerned with improving sanitation in and around dwellings. The power to enforce housing standards, for the most part, has since passed into the hands of local government. The Public Health Code enacted in 1978 included a provision for the establishment of statewide housing standards but this section of the code has been repealed.

The state retains jurisdiction of sanitation standards for agricultural labor camps. In 1966, there were 2610 licensed migrant labor camps in Michigan. That number has decreased steadily since then, reaching a low of 761 in 1983; there were 804 licensed camps in 1986. The mean camp capacity in 1986 was 32.8 persons.[6]

Problems related to water supply are handled by state and local health departments. Michigan Department of Public Health is responsible for the regulation of municipal water supplies. Local health departments distribute educational information on codes for private well construction and the means of registering workers who drill wells; they may also collect water samples for analysis at state or local laboratories.

Injury prevention related to housing neighborhood safety is handled through local housing code enforcement agencies and a variety of community education programs such as those provided by the American Red Cross, local Safety Councils, and other organizations.

Rodents

Rodent infestation presents the risk of injury by rat bite, and potential spread of infectious diseases. The MDPH Comprehensive Rodent Control Program has both an educational component and a rat control unit that canvasses local neighborhoods after a complaint has been received of a rat bite or a rat sighting. In five urban areas with local rodent control programs (Wayne County, Ypsilanti, Battle Creek, Saginaw, and Benton Harbor), rodent infestations occur more frequently in those census tracts with a large proportion of housing units occupied by minorities.[7]

Rodent infestations occur more frequently in those census tracts with a large proportion of housing units occupied by minorities.

Asbestos

The assimilation of asbestos into the body occurs primarily through the nasal passages. The longer, thinner asbestos fibers are especially hazardous because they are easy to breathe and are difficult to expel from the body.[8] Because of the danger of exposure to asbes-

tos, standards in the United States for occupational settings have been lowered several times over the years: from thirty fibers/cc (ACGIH ruling)in 1938 to 0.2 fibers/cc in 1986.[9]

All asbestos workers are at risk for mesothelioma and excess cancer, particularly lung cancer; but asbestos workers who are smokers are at especially high risk for lung cancer.[10] There is little information on asbestos-related mortality for those exposed in non-occupational settings because most of the research on asbestos has focused on occupational[11] rather than non-occupational settings.

Most non-occupational asbestos complaints occur in areas with a high concentration of minority populations.

Asbestos exposure in urban areas of the U.S. occurs primarily through housing insulation and various kinds of floor tile.[12] Risks to health for persons at school appear to be minimal, except for those who have experienced prolonged exposure.[13]

The Department's Asbestos Abatement Inspection Program is responsible for inspections when there is a complaint about a building where it is believed that exposed asbestos presents a hazard. Since the Program was initiated in May 1987, it has received 187 complaints; of the 133 investigations completed, 39 have resulted in citations.[14] Most non-occupational asbestos complaints occur in areas with a high concentration of minority populations (Detroit, Saginaw).

Lead Poisoning

The assimilation of lead into the human body occurs through the mouth, nasal passages, the skin and from the mother to fetus across the placenta. After lead has been assimilated into the body, it is altered by certain dietary compounds; for adults, about 50-60 percent is excreted before it is stored in the skeleton.

Lead burden generally is considered at two levels: lead poisoning in which acute clinical effects are evident (such as an inflammation of the brain, thought to occur roughly at 70-80 ug/100 ml) and subclinical levels which cause some degree of behavioral malfunctioning. Research findings have varied on the specific level at which this can occur.[15]

Blood lead levels peak in early childhood, then decrease until the late teens when they again reach pre-teen levels. Infants generally share blood lead levels similar to those of their mothers, but, depending on the mother's circumstances, infant levels may increase at 3 to 6 months of age and peak around 24 months. Survey researchers suggest that the rise in lead levels is associated with weaning and the infant's intake of commercial milk, as well as its beginning involvement with the surrounding environment.[16]

Blacks in the United States have been found to have higher concentrations of blood lead than Whites. Ethnic differences are more pronounced for young children than adults, and they often are associated with socioeconomic factors.[17] Data for other minorities in the United States are not available.

Since automotive emissions produce most of the air pollution associated with lead, concentrations of lead are higher in areas having a large volume of traffic. Traffic flow increases the concentrations of lead in external sources such as roadside dust, particularly during the summer months.[18] Lead emission is greater during slow city driving than fast freeway driving, and is especially high during accelerations, such as might occur on entrances to freeways or at traffic lights.[19]

At least 75 percent of the lead ingested by children in the urban environment is through dietary sources such as food and water;[20] extraneous sources such as dust and paint may account for the remainder. The primary sources of lead in the water supply are lead piping and lead-based solders and fluxes used to join copper piping. Lead's entry into the food chain arises from airborne deposits of lead on crops and lead solder seams in some food containers.[21]

Although the majority of lead is assimilated through dietary sources, the primary risk of acute lead poisoning in young children is through lead paint. Another significant source of acute lead poisoning is dust, both indoors and outdoors. Particles of airborne lead deposited in dust and soil usually come from automotive emissions and industrial sources.[22] There may be a reduction in risk of lead contamination through the air owing to legislation requiring the sale of unleaded gasoline; decreased concentrations of blood lead in a population of children have been correlated to reductions in sales of leaded gasoline.[23]

Injury

Falls are the most common housing-related injury. The hospital discharge rate for falls appears to be high among non-Black minority groups. Burns are another type of injury for which minorities are at particularly high risk. The hospital discharge rate for injuries due to fires, flames, and hot substances was two to three times higher for Blacks and other minorities than the comparable rate for Whites. Another injury of special concern in minority communities is poisoning due to the consumption of illegal pesticides by children. Illegal pesticides are packaged in milk containers and sold as "roach milk." The discharge rate for injuries due to poisoning by substances other than alcohol and drugs was twice as high for Black males and Black females under age twenty than for White males and White females of the same age. The poison related discharge rates for other minorities were also higher than the White rates. (See Chapter Six).

The hospital discharge rate for injuries due to fires, flames, and hot substances was two to three times higher for Blacks and other minorities than . . . for Whites.

Air Pollution

The Michigan Department of Natural Resources (DNR) is responsible for preventing and maintaining air pollution below levels that could be hazardous to human health. The DNR responds to complaints on possible violations of the air pollution code and canvasses selected areas of the state on a regular basis. The director of the Michigan Department of Public Health is a member of the DNR's Air Pollution Control Commission. Data currently are unavailable on the impact of air pollution on areas in which minorities live and work.

Nuclear Waste

The potential hazards from low level radioactive nuclear waste disposal sites is of concern to all Michigan residents. Situating disposal sites away from major population centers only partially relieves public apprehension about the dangers. Michigan's central location with respect to the Great Lakes makes the location of disposal sites in this state an issue of national concern. Given the sparse distribution of a significant portion of the Native American Indian population in rural areas where sites are likely to located, this question is of particular interest to this population. The special "government to government" relationship of Indian tribes with the federal government must be respected. The Michigan Department of Public Health has the responsibility for monitoring sites once they are established and for addressing public concern about the issue.

Agriculture has the third highest rate of occupational injuries, only ranking behind mining-quarrying and construction.

Environmental Hazards and Migrant Workers

It is estimated that about 45,000 persons work in Michigan each year as migrant agricultural laborers; some 80 percent of these workers are Mexican Americans.[24] Agriculture has the third highest rate of occupational injuries, only ranking behind mining-quarrying and construction.[25] Those working in agriculture are also at increased risk for such diseases as leukemia, multiple myeloma, lymphoma and cancer of the prostate and stomach.[26] Agricultural laborers are more prone to parasitic infection than growers, and their diets provide lower nutritional intake.[27]

Little is known about pesticide poisoning among migrant farm workers in the state of Michigan. Since there is no monitoring system to report pesticide poisoning cases in the state, there is data neither on the prevalence of poisonings nor on the long-term effect of pesticide use on farm workers. Labor

organizations, clinical services and legal programs have developed bilingual educational programs to inform migrant workers of their rights with regard to pesticide exposure and the effects that pesticides may have on their health.[28]

One of the chief concerns of advocates for greater pesticide control is the exemption of agricultural workers when Right to Know legislation was passed on chemical substances. Expanding the rights of agricultural workers to know about hazards from the substances with which they work is important. Equally important is ensuring that workers are able to exercise these rights.

Expanding the rights of agricultural workers to know about hazards from the substances with which they work is important.

There is also a need for a system of data collection on occurrences of pesticide poisonings. A clearinghouse has been proposed to centralize the reporting and recording of cases of pesticide poisonings. Blood testing for pesticide poisoning is also an issue of concern. The Environmental Protection Agency will only pay for testing if the results verify a case of poisoning. The cost of unverified cases becomes the responsibility of individual clinics or their parent organization. Therefore, alternative sources of funding for blood tests also has been proposed.

A related concern is a field sanitation standard which includes toilet facilities, and drinking and washing water. A proposed standard for field sanitation for agricultural laborers has been developed by the Michigan Department of Public Health Occupational Health Standards Commission. It requires that agricultural employers shall provide employees with adequate, potable, cool drinking water, adequate sanitary toilets and adequate hand-washing facilities.[29]

Conclusion

Environmental issues such as the hazards from toxic dump sites, nuclear waste, and the protection of forests, rivers, and lakes receive considerable attention. The problems of the urban environment and those faced by migrant farm workers, which disproportionately affect minorities, need increased attention. Many of the urban environmental hazards and the hazards confronted by farm workers affect children and have a long-term impact on our society.

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Chapter Ten

AIDS

Background

From 1981 to January 1, 1988, 518 cases of acquired immunodeficiency syndrome (AIDS) were reported in Michigan. Two cases were reported in years 1981 and 1982, 16 cases in 1983, 42 cases in 1984, 86 cases in 1985, 146 cases in 1986, and 224 cases in 1987. Males constituted 92 percent of cases (N=477), females 8 percent (N=41). Sixty-five percent of all cases (N=338) were diagnosed in the 20-39 age group.

AIDS is a deadly disease. About 50 percent of persons diagnosed as having AIDS die within a year of diagnosis; ninety percent die within five years.

The bulk of AIDS cases has occurred among certain subgroups of the population. Sixty-one percent of cases (N=318) were males with a history of homosexual/bisexual contact, 19 percent of cases (97/518) reported intravenous drug use, and seven percent (37/518) reported both homosexual/bisexual contact and intravenous drug use.

The racial breakdown of these cases showed that 55 percent (N=283) were White and 44 percent (N=227) were Black; the remaining one percent (N=8) primarily consisted of Hispanics. Race-specific AIDS case rates were 3.7 per 100,000 Whites and 17.9 per 100,000 for Blacks. The Black rate was 4.8 times higher than the White rate (Table 10-1). National data also show higher rates for minorities than for Whites.

TABLE 10-1

Michigan AIDS Cases By Race January 1, 1988.

RACE POPULATION	NO. OF CASES	RATE PER 100,000*
White	283	3.70
Black	227	17.94
Hispanic	6	3.70
Other	2	–
Total	518	5.70

TABLE 10-2

Mode Of HIV Transmission By Race, Michigan, January 1, 1988

Transmission Mode	Blacks No. %	Whites No. %	All Races No. %
Homosexual/bisexual	90 (40)	222 (79)	319 (62)
Intravenous drug use	87 (38)	09 (03)	97 (19)
Homosexual/bisexual, intravenous drug use	23 (10)	14 (05)	37 (07)
Mother to Child	08 (04)	00 (00)	08 (02)
Heterosexual	07 (03)	08 (03)	15 (03)
Blood product transfusion	01 (01)	24 (09)	25 (05)
Unknown	11 (05)	06 (02)	17 (03)

TABLE 10-3

Trends in Major Modes Of HIV Acquisition, Michigan Blacks

MODE OF HIV ACQUISITION	NO. OF CASES (%) PRE-1986 N=68	1986 N=69	1987 N=100	TOTAL N=227
Homosexual/bisexual	35 (52)	25 (42)	30 (30)	90 (40)
Intravenous drug use	14 (21)	22 (37)	51 (51)	87 (38)
Homosexual/bisexual and intravenous drug use	10 (15)	06 (10)	07 (07)	23 (10)

Transmission

Approximately 40 percent of Michigan Blacks with AIDS are believed to have contracted the disease through male homosexual/bisexual contact. The remainder of Michigan Blacks with AIDS contracted the disease by intravenous drug use (IVDU), 38 percent; male homosexual/bisexual contact and IVDU, 10 percent; heterosexual contact, three percent; and blood product transfusion, less than one percent. Eight Black children in Michigan contracted AIDS through vertical transmission from mothers who were directly or indirectly infected secondary to intravenous drug use. The mode of transmission for the remaining five percent of Michigan Black AIDS cases is unknown Table 10-2).

Of the six Hispanic AIDS cases diagnosed to date, five were male homosexual/bisexuals, and one was an intravenous drug user. Four of these six cases were reported from the metropolitan Detroit area.

The proportion of AIDS cases among Michigan Blacks attributed to intravenous drug use is particularly disturbing. As of January 1, 1988, 87 Blacks compared to nine Whites contracted AIDS as a result of intravenous drug use; these data yield race-specific rates of 6.87 per 100,000 and 0.11 per 100,000, respectively: The Black rate is sixty three (63) times as high as the White rate. Furthermore, the data demonstrate that the proportion of Blacks with AIDS who acquired the virus from intravenous drug use has increased from 21 percent in the pre-1986 years, to 37 percent in 1986, to 51 percent in 1987 (Table 10-3). As noted above, the majority of these cases were reported from the Detroit area. The Michigan Office on Substance Abuse Services estimates that there are 30,000 to 35,000 intravenous drug users in the Detroit area. If current estimates are correct that up to 50 persons are infected with human immunodeficiency virus (HIV) for every person diagnosed with AIDS, then there probably exists a large cohort of infected drug users in the Detroit area who are sharing needles or having sexual relations with susceptible persons. Unless this behavior is modified, and unless further contact is made with minority communities to reduce the risk of AIDS transmission among intravenous drug users, a large increase in the number of AIDS cases in the Detroit area can be expected.

An additional consequence of the heightened prevalence of HIV among intravenous drug users is an increased spread to heterosexuals and children. In Michigan, six of the 14 cases of heterosexually transmitted AIDS cases resulted from contact with an infectious intravenous drug user. Furthermore, all but one of the nine cases of pediatric AIDS could be traced to intravenous drug use, either by the mother or her sexual partner. Sixty-five percent (15/23) of these heterosexual and pediatric AIDS cases occurred among minority members; it will therefore be necessary to target minority communities for appropriate risk-reduction interventions.

The potential for heterosexual spread of AIDS in the minority populations of Michigan is disturbing. Data from the Venereal Disease Section at the Michigan Department of Public Health show that the rates for reports of syphilis and gonorrhea in the other than White population, 18.4 per 1000, are 11 times greater than the rates in the White population, 1.6 per 1000. These data suggest that if the HIV becomes more prevalent among heterosexuals, then the likelihood of disproportionate spread within minority communities is high.

Data suggest that if the HIV becomes more prevalent among heterosexuals, then the likelihood of disproportionate spread within minority communities is high.

Prevention and Treatment Programs

The Michigan Department of Public Health has undertaken various steps to curb the spread of AIDS in minority communities. A $1,000,000 statewide multi-media campaign has been started which focuses on common modes of HIV transmission and ways to prevent such transmission. Portions of this campaign have been targeted to reach young, inner-city Blacks and Hispanics in Southeastern Michigan.

A task force has been assembled to determine prevention strategies for AIDS in the Hispanic community. This task force's report will provide direction to the Michigan Department of Public Health and the Michigan Office on Spanish Speaking Affairs, on culturally relevant ways to prevent the spread of AIDS in Michigan's Hispanic community. In addition, the Department has worked with the Office on Substance Abuse Services, to curb the spread of intravenous drug use associated AIDS; particularly within Michigan's minority communities.

To facilitate the AIDS prevention effort in minority communities, financial assistance has been provided, through the U.S. Centers for Disease Control Minority Grant Activity, to community-based organizations such as the Community Health Awareness Group which serves predominantly minority populations. This organization provides AIDS education, street outreach, counseling and testing, and referral services to intravenous drug users, particularly pregnant intravenous drug users. In addition, the Southern Christian Leadership Conference provides training sessions for church leaders who are willing to use the church forum for AIDS prevention by reaching the significant other of the intravenous drug user. AIDS counseling and testing within the metropolitan Detroit area Hispanic community has been initiated through La Casa.

Plans are also under development to provide AIDS education services to the Native American population in Michigan by assuring accessibility to counseling and testing and implementing Indian health care provider education.

The prevention of AIDS in the infant and child population is dependent upon effective risk reduction among women of childbearing age.

The prevention of AIDS in the infant and child population is dependent upon effective risk reduction among women of childbearing age. A maternal and infant health task force is being developed to provide recommendations regarding AIDS-related prevention and treatment services to mothers, children and newborns. The Michigan Department of Public Health is planning for the prevention and management of AIDS through the maternal and child health programs. These programs provide services to women who may be members of high risk groups with high potential for transmitting HIV infection to their babies. Services are targeted for women at economic disadvantage, who may have additional risks for adverse pregnancy outcomes. These services, many of which are targeted already for minority women, provide opportunity for the identification of high risk behaviors and intervention to prevent AIDS in both women and their infants. Finally, adolescents in Michigan will receive education in school under P.A. 185 of 1987 which requires AIDS education under the communicable disease curriculum. The AIDS curriculum for grades 7-12 has been distributed to all school systems.

Conclusion

Reaching members of minority populations at risk of AIDS in Michigan is important. As the reported modes of AIDS transmission indicate, members of minority populations who are at risk for AIDS may be difficult to reach due to illegal behavior (intravenous drug use) or cultural ostracism (homosexuality). Moreover, the diversity of minority populations affected by the AIDS epidemic will require that efforts to prevent and limit the spread of AIDS be acceptable to various ethnic groups.

The opportunity exists to combine the resources and talents of public health officials and concerned community groups. Such collaboration will be necessary to combat a disease that has severe medical consequences, yet also requires a culturally sensitive approach to prevention. Such cooperation offers our best hope at slowing the progress of this epidemic and preventing new infections in the future.

Chapter Eleven

TUBERCULOSIS

The incidence of tuberculosis has generally been declining in both Michigan and the United States from the mid-1960s until 1986. Both national and Michigan rates increased in 1986, however. The number of tuberculosis cases increased from 640 to 715 in Michigan, the third largest increase among states. Although the incidence rate for Michigan remains substantially lower than that for the nation, the substantial increase in the Michigan rate from 5.8 to 6.6 per 100,000 is cause for concern.[1]

The decline in tuberculosis rates over the past three decades has been much greater among Whites than among minorities. Consequently, the proportion of cases occurring among minorities has substantially increased. In Michigan and nationally, the majority of tuberculosis cases in 1986 occurred among members of minority groups. Although they represent only about 20 percent of the state's population, minorities accounted for 72 percent of Michigan tuberculosis cases in 1986. Moreover, the 1986 increase in the number of cases was entirely confined to members of minority groups, among whom there was an increase of 87 cases while a decline of 14 cases occurred among Whites.

Tuberculosis incidence rates for Blacks, Hispanics, Asian and Pacific Islanders, and American Indians are all substantially higher than the White rate (Table 11-1). The rate for Asian and Pacific Islanders was especially high, 23.8 times higher than that for Whites. Of 38 Asian and Pacific Islander cases, 34 were born in Asia and 23 arrived within the past five years.[2]

The rate for Blacks was nearly seven times the White rate. The rate for American Indians was 3.6 times the White rate and that for Hispanics was 2.8 times the White rate. Michigan's Black/White differential in tuberculosis incidence rates is somewhat larger than that observed for the nation (6.0),

TABLE 11-1

Newly Reported Tberculosis Cases and Case Rates by Race Michigan, 1986

	NO. OF CASES	RATE/ 100,000*
Total	615	6.6
Non-Hispanic White	259	3.3
Black	291	24.3
Asian/Pacific Islander	44	78.6
American Indian	5	12.5
Hispanic	16	9.8

28.3 percent of minority cases occur among persons under age 35 compared to only 7.3 percent of White cases.

whereas the American Indian[3]/White and Hispanic/White differentials for Michigan were somewhat smaller than those observed nationally.[4] Accurate reporting of race/ethnicity status for Hispanics and American Indians may be less common in Michigan than in states where these groups represent a larger proportion of the state's population.

The racial gap in tuberculosis incidence rates is even more striking when age is considered. Discrepancies in age-specific rates tend to be even larger than the overall rate discrepancy. More importantly, 28.3 percent of minority cases occur among persons under age 35 compared to only 7.3 percent of White cases. Most of the tuberculosis cases among younger persons result from recent transmission of the tubercle bacilli. Because recently infected persons are much more likely to progress to disease than those whose infection is long-standing, one key measure necessary to control tuberculosis is to identify high risk contacts and place them on preventive treatment. The Centers for Disease Control also recommends the use of preventive therapy among high risk populations.

High risk groups include:
1. young adult American Indians and Alaskan natives.
2. persons with diabetes.
3. HIV-infected individuals.
4. immigrants from areas with a high prevalence of tuberculosis.

As in Michigan, national data show that tuberculosis among Asian and Pacific Islanders was almost entirely among the foreign born population. More than half of the foreign born Asian and Pacific Islander patients arrived in the United States when they were under age 35, the age group for which preventive therapy is routinely recommended for persons with tuberculosis infection. Nearly half of foreign born Asian and Pacific Islanders with tuberculosis became ill within two years after their arrival. "Half of all tuberculosis cases among Asian and Pacific Islanders would be potentially preventable," the CDC concluded, "if refugees and immigrants were given tuberculin skin tests and offered preventive therapy according to current guidelines shortly after arrival in the United States." Because of resistance to isoniazid, one of three antituberculosis drugs, among Southeast Asians, there is a need to develop alternative regimens of preventive therapy.[5]

Nineteen of the 518 AIDS cases reported to CDC from Michigan have also developed tuberculosis. Thirteen of these nineteen patients were Black. HIV infection may be a contributing factor to the observed increase in tuberculosis morbidity.

Conclusion

The reduction in tuberculosis control efforts that followed the substantial decline in tuberculosis morbidity in the past few decades was premature. Increased efforts at controlling tuberculosis are needed, particularly among the minority population.

Notes

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2. Tuberculosis Control Program, Michigan Department of Public Health, unpublished data.
3. National data includes Alaskan Natives and American Indians.
4. Centers for Disease Control. Tuberculosis, Final Data-- United States, 1986. *Morbidity and Mortality Weekly Report* 36:(50 & 51): 817-820, January 1, 1988.
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Chapter Twelve

PROBLEMS OF CHILDREN

Because of childrens' vulnerability, how well a society treats its children is an indication of the society's compassion as well as its future well-being. Children are developing physically as well as socially and emotionally and are dependent upon others to provide for their special health needs. They require a healthful environment for proper growth, e.g., protection from diseases and other illnesses; adequate, nutritious food; freedom from injury, as well as an opportunity to learn good health habits.

Protection from Chronic Disease and Disability

Infant health

Infants are most vulnerable to the effects of an unhealthy environment. Prenatally, the fetus is extremely sensitive to maternal behavior and, following birth, infants have critical health needs.

The discrepancy between the health status of the minority and the majority populations is perhaps nowhere more disturbing than in the area of infant mortality and morbidity. Infant mortality, low birth weight and other adverse outcomes are discussed in detail in Chapter Seven and interventions to deal with the problem in Chapter Twenty.

Acquired immunodeficiency syndrome (AIDS) is a growing problem that has begun to affect children

AIDS and children

Acquired immunodeficiency syndrome (AIDS) is a growing problem that has begun to affect children. This illness, which destroys the body's ability to fight disease, has been transmitted to many children with hemophilia who were treated with HIV-infected blood products prior to improved screening of donated blood. The most important current mode of transmissions to children is from an infected mother to her child before or during birth. Approximately 30-50 percent of mothers with AIDS will transmit this disease to their infants *in utero*.[1] In Michigan, 10 newborns had been infected with AIDS as of March, 1988.

Children who are infected with the AIDS virus will suffer many serious problems. Social and physical interaction are extremely important for development, however, many people fear contact with these children. Furthermore, the families of infants with AIDS face economic strains as well as social stigmatization. Many parents of AIDS children are ill themselves or are dependent on drugs and may not be able to provide adequate care. These extremely needy children will require special help from health care professionals, social support agencies and other sources of assistance.

The Michigan Department of Public Health (MDPH) is providing support to 24 local health departments to operate counseling and testing centers that currently serve a total of 750 clients a month. As of March 31, 1988, 10,000 people have been counseled and tested. By the end of 1988, it is expected that the Department will support all local health departments in these efforts with service to approximately 15,000 people annually. Counseling and testing services are being offered also in family planning programs. A Maternal and Child Health Task Force on AIDS is being developed to provide AIDS-related prevention and treatment services to mothers, children and newborns. This 59 member task force is being convened through the efforts of the Department and is addressing such issues as foster care, respite care, and education for foster parents.

Immunization

The incidence of childhood viral diseases has been shown to be lower in states that have school immunization laws.[2] The U.S. Centers for Disease Control recommends that state laws require all students K-12 to have the measles-mumps-rubella (MMR) vaccine.[3] They also recommend that children 15 months or older receive simultaneous administration of MMR, diphtheria, tetanus, pertussis (DTP), and oral poliovirus vaccine (OPV) rather than postponing the latter two shots until 18 months.[4]

In Michigan, which adheres to Centers for Disease Control standards for immunization, 14 percent of the 145,599 children enrolled in kindergarten for the 1986-87 school year had not had their complete set of shots at the beginning of the school year.[5] By mid-year, 7 percent had not had the required shots. Of the five types of vaccine, compliance is lower for the DTP and OPV immunizations, (88 and 91.4 percent compliance, respectively) than is compliance with the MMR requirement (94.2, 93.9, and 94.0 percent compliance, respectively). These compliance rates are slightly lower than the national rate of 97 percent compliance found for each of the five vaccines.

Examining the percentage of all school children, K-12, who have complied with or are in the process of complying with the immunization standards, the compliance rate for the state was 92.5 percent as of February 1987. Some national studies have shown minority children are less likely to be immunized than are other children.[6] Compliance rates in Michigan counties that contain a large percentage of the states' minority population are, however, equivalent to other counties on the average. For example, Kent, Genesee, Detroit and Ingham had compliance rates of 93.4 percent, 92.9 percent, 92.6 percent and 92.4 percent, respectively. Wayne, Kalamazoo and Oakland, which also have large minority populations, had somewhat lower compliance rates of 91.5 percent, 91.0 percent and 90.8 percent, respectively (ranking sixtieth, sixty-fifth and sixty-sixth out of the state's 84 counties). Nevertheless, other counties with large minority populations ranked higher than average. In particular, Berrien, Muskegon, Calhoun, Washtenaw and Saginaw report 95.0 percent, 95.0 percent, 94.3 percent, 94.2 percent and 94.0 percent compliance rates, respectively.

Immunization rates among Native Americans and migrants in Michigan are considerably lower than those for the state as a whole. Of those children age 3-27 months living on Indian reservations, 73.4 percent had vaccinations appropriate for their age. This figure is lower than the comparable rates of 86.7 and 89.3 percent reported for Native Americans living on reservations in Minnesota and Wisconsin, respectively.[7]

Data from migrant Child Care and Education Programs in Michigan indicate that only 64 percent of the children who attended during the summer of 1987 had received all immunizations recommended for their age. An additional 7.2 percent are in the process of completing their immunizations. Approximately 10 percent of the children were allowed to enter the program without immunization records.[8]

Children who attend school without the proper immunization are at risk of contracting and spreading preventable diseases. It is important that school principals and directors provide their state health department with the immunization status of each child, and that each child be required to receive proper immunization or be excluded from school.

It is important that school principals and directors require each child to receive proper immunization

In the last two decades many social and familial changes have occurred that potentially place children at higher risk for emotional and health problems.

Changing Social Structure

In the last two decades many social and familial changes have occurred that potentially place children at higher risk for emotional and health problems. In 1982, 22 percent of all children under eighteen were living in a single parent household[9] and fewer than half of all Black children lived in two parent families.[10] Of all children in single-parent families headed by a woman, over 50 percent were living below the poverty level. Children in such families are most likely at a higher than average risk of emotional problems and may lack adequate health care. Many mothers are required to work full-time, due to single parent status or other economic circumstances. In many such households children are more likely to be unsupervised after school and are thus more vulnerable to accidents and other health risks.

Food Programs

Children from birth to five years of age, who are "at risk" for some kind of health or nutritional problem, and at or below 185 percent of the poverty level, are eligible for the federally-funded Special Supplementary Feeding Program for the Women, Infants, and Children Program (W.I.C.) W.I.C. issues coupons to obtain formula and food products such as cereal, juice, milk, cheese, etc. In the Wayne County Department of Health, the approximately twenty-five thousand individuals entered yearly in the W.I.C. program receive some form of nutritional counseling. Last year approximately 81 percent of these were Black children, 13 percent were White, 3 percent were Hispanic and less than one percent were American Indian or Asian/Pacific Islander.[11]

The goal of the Lunch and Breakfast Program is to provide balanced meals for low income children at school, either free or at 40 percent of cost. Of 672,625 students served at present, 38.9 percent receive free meals and 5.2 percent receive reduced-rate meals; the rest purchase meals at full price.[12]

Unintentional and Intentional Injuries

Injury has a disproportionate impact on the young. Accidents were the leading cause of death for Michigan children age 1-14 in 1984 (Whites: 22.2, Blacks: 14.2 per 100,000).[13] In 1985,

there were 29,256 hospitalizations of children, age 0-19, due to injury in Michigan, making it the second leading cause of hospitalizations for children. Furthermore, injury was the leading cause of non-birth related deaths among Michigan children in 1985 (660 deaths).

Studies show that child abuse and neglect is increasing—about one million children in America are abused and neglected. Between 100,000-200,000 are physically abused, 60,000-100,000 are sexually abused and the remainder neglected. According to a national study, children age 3-5 and 15-17 are the most vulnerable to abuse and neglect. This study also reveals that there is an increase in family violence especially among younger parents.[14]

Homicide was the second highest cause of death among Black children age 1-14 in Michigan in 1984.

Homicide was the second highest cause of death among Black children age 1-14 in Michigan in 1984. The rate was nearly 8 times higher than the White rate for the same age group. (Blacks: 8.3, Whites: 1.1 per 100,000).[15] Likewise, intentional injury was the leading cause of injury-related hospitalizations for Black children age 0-19 (895 cases). The rate of hospitalization of Black children for intentional injury was more than three times that for White children. Of the nearly 800 Black homicide victims in 1986, over 500 were under the age of 35 years. The years of potential life lost before age 65 (YPLL) is 16 times higher for Black males than for White males and 7 times higher for Black females than for White females. Deaths from suicide and homicide were three times higher for Black children than White children in 1982 (age 0-19). Death rates from drowning were slightly higher for Black children than White children. Deaths from burns were six times higher for Blacks than for Whites.[16]

Health Education

Health practices that are learned in childhood continue into adulthood. Therefore, it is important that children learn proper health behaviors, such as eating nutritious meals and getting the proper rest at night.[17] Education of the young is, therefore, an important intervention strategy.[18]

Smoking prevention and cessation

Studies reveal that children are engaging in many unhealthful behaviors that could influence their health as adults. For example, cigarette smoking is a major risk factor for cancer and cardiovascular disease. A 1986 national survey reveals that 19 percent of high school seniors smoke daily and that 68 percent had smoked at least once.[19] Most people begin smoking during junior or senior high

school. Effective prevention efforts targeted at children, therefore, are an especially important area for public health action.

Schools provide an ideal opportunity to give children health care information. For example, the Know Your Body program provides health screening and health education to school age children[20]. This program deals with cardiovascular risk factors such as hypercholesterolemia, obesity and cigarette smoking.

The Minnesota Heart Health Program is based upon the concept that behavioral habits are learned and influenced to a large extent by the surrounding culture. The project involves community groups, physicians and health professionals and provides risk factor screening programs and health education classes to the public. The education strategies also include media-based information, smoking cessation projects in schools, education for health professionals, and community-wide risk factor campaigns. Community coalitions can be effective in enhancing awareness about health issues and changing the climate of opinion about health behaviors.

In Michigan, the Department of Public Health is funding several projects throughout the state that are modeled upon the Minnesota Heart Health Program. The Michigan projects are aimed at women of childbearing age and children.

One Michigan project is taking place in Genesee County where there is a large minority population and a high infant mortality rate. This 18-month Genesee County Health Department program provides a smoking cessation clinic to women in the Special Supplemental Feeding Program for Women Infants and Children and also provides smoking prevention activities targeted at school children aged 11 to 18. This program involves community groups like the Scouts, Big Brothers and Big Sisters and church groups.

Current drug use prevalence was higher among seniors from urban areas and among those who did not plan to attend or complete college.

Alcohol and drug abuse

Responding to a nation-wide survey conducted by the University of Michigan Institute for Social Research[21] in 1986, 58 percent of high school seniors reported that they had used illicit drugs at least once. The percentage using particular illicit drugs was as follows: marijuana-51 percent, stimulants-23 percent, inhalants-20 percent, cocaine-17 percent. Alcohol was the most commonly used drug, however, with reported use remaining stable at approximately 90 percent since 1975. The use of sedatives and tranquilizers decreased somewhat since 1975. The rate of cocaine use, however, increased from 9 percent in 1975 to 17 percent in 1986.

Current drug use prevalence was higher among seniors from urban areas and among those who did not plan to attend or complete col-

lege. For example, the prevalence of cocaine use in major urban areas was 18.8 percent as compared to 9.9 percent in non-urban areas. Among seniors with plans to complete college, 10.6 percent report having ever used cocaine as compared to 14.4 percent of those who did not plan to attend college. Drug use may be higher than average among minority students since most reside in urban areas and are less likely than their non-minority counterparts to attend college.

In Detroit, 85 percent of the youths age 9-18 who requested treatment for drug abuse from the Detroit Health Department during 1985/86 were Black.[22] The primary substances abused by all youths seeking treatment were marijuana (60.1 percent), alcohol (15.3 percent), cocaine (12 percent) and other (12.6 percent). Although adults are more likely to seek treatment than are youths (11,227 adults in 1984/85; 176 youths 1985/86), almost all adults admitted to the treatment program reported that they began using drugs during their teen years.[23]

Nutrition

Poor nutritional habits learned in childhood may result in hypertension, hyperlipidemia and cardiovascular illness in adulthood. For example, due to poor dietary habits, the typical intake of sodium in this country is much higher than that recommended by the Food and Nutrition Board of the National Research Council (1980) of 1 gram of sodium per 1,000 calories consumed.[24] While the effects of sodium on blood pressure in children is unexamined, this dietary habit is very unhealthful for many salt-sensitive adults.

School districts should be encouraged to provide lunches that meet current guidelines in terms of sodium, fat and sugar content.

The consumption of fatty and high calorie foods has been shown to have negative health effects upon children as well as adults. For example, fatty foods have been shown to elevate cholesterol levels in children. According to a recent survey from the National Institute of Health (1985), 25 percent of the nation's children have elevated cholesterol levels that could be decreased with improvements in diet. Furthermore, excessive consumption of high calorie foods may result in overnourishment and obesity. It is important, therefore, that children develop good eating habits to assure their good health as children and as adults.

Children could be helped in developing good eating habits through the efforts of schools districts. Districts should be encouraged to provide lunches that meet current guidelines in terms of sodium, fat and sugar content. Furthermore, non-nutritious "junk foods" should be removed from school lunch programs and vending machines that are placed in schools.

Conclusion

Childhood is a time of vulnerability but also a time of opportunity. Public health programming targeted at children can have an especially important impact on the future health of the state. Minority children face greater health problems than do non-minority children. Therefore, it is especially important to focus public health efforts on assisting minority communities and children in overcoming health problems so they can reach their full potential.

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Chapter Thirteen

PROBLEMS OF THE ELDERLY

Health is a central concern to the elderly since they are more susceptible to disease and ill health than are younger persons. Indeed, the Michigan Office of Services to the Aging reports that nearly one-quarter of their sample of Michiganders over 60 consider themselves to be in fair, poor or very poor health[1]. In addition to having critical health needs, the elderly often must rely on others for assistance in order for these needs to be met. Discrimination and poorer economic status exacerbates the problems faced by the minority elderly.

Characteristics of Elderly in Michigan

In Michigan in 1985, there were 1.4 million persons over the age of 60. According to the *Michigan Needs Assessment of the 60 and Over Population*,[2] 28.3 percent of this group are over age 75, 62.2 percent are female, and 38.5 percent live alone. As found nationally, the proportion of this group over 75, female and living alone is becoming greater in Michigan. Ninety-one percent of those over sixty are White, nine percent are Black, 0.2 percent are Hispanic, and 0.2 percent are Native American. Thirty-five percent live in cities, 17 percent live in suburbs and 31 percent live in small towns and 18 percent live in rural areas.

Twenty-two percent indicate that insufficient income was a concern. Fifty-six percent use social security as their main source of income and 23 percent are at or below 125 percent of poverty. The service

most frequently requested by the elderly in this study was transportation (22 percent).

Home maintenence was also a serious problem for the elderly, of which 82 percent own their own homes. While 94 percent of elderly homeowners are satisfied with their current housing, many are not able to make home repairs (73 percent of homeowners) and some had difficulty paying for housing and up keep. Twenty-three percent of this group report that their home is poorly insulated and 25 percent of the elderly are living in houses that are over 50 years in age. The inability of many elderly to maintain their own homes and the age of these homes may put the elderly at special risk of living in unsafe and unsatisfactory housing.

The inability of many elderly to maintain their own homes and the age of these homes may put the elderly at special risk of living in unsafe and unsatisfactory housing.

This study also reveals that the elderly perceive their most serious problem to be poor health (25.7 percent report this) with 25 percent reporting poor or fair health. Twenty-three percent have been bedridden in the previous six months, and 23.4 percent have been hospitalized. The five most frequently reported illnesses or symptoms among the elderly are joint problems (64.0 percent), sight problems (56.1 percent), high blood pressure (49.0 percent), overweight (34.6 percent) and hearing problems (23.6 percent).

The amount of research evidence linking behavioral changes to reduced risk of disease in older adults is much less than in younger and middle-age groups. Some exceptions are smoking cessation and the control of hypertension. Other risk factors which have been present for decades may have worked an irreversible effect by the time a person has reached older adulthood. Risk areas that can be modified in older adults include smoking, diet, exercise, hypertension, stress and isolation, and substance abuse.

Another important health care problem for older adults is the use of medication. Those over 65 comprise about 11 percent of the nation's population, but consume about 25 percent of all prescriptions annually.[3] Older persons who have multiple chronic illnesses are likely to be taking several medications at once which increases the risk of undesirable drug interactions. In one Michigan regional psychiatric hospital, 65 percent of the older adult admissions for "emotional problems" were medication related.[4]

The cost of medications is also a serious problem for the elderly. New Jersey and Pennsylvania are conducting programs that provide pharmaceutical aid to the elderly. Those enrolled in these programs spend approximately $300 per year on the average on prescriptions.[5] The Michigan House Bill 4141, which was passed into law April 28, 1988, is designed to establish an "Older Person's Prescription Drug Coverage Program" within the Office of Services to the Aging. This program will provide pharmaceutical services to needy persons 62 years and over who are not eligible for Medicaid. The Michigan Office on Services to the Aging estimates that there are 202,188 persons in the State age 62 and over who would qualify for the proposed program.

A 1982 needs assessment survey of Detroit elderly (60 and over)[6] shows that poor health, restricted mobility and insufficient income were among the most frequently mentioned problems. When asked what services they would like to see improved for seniors, 22 percent requested transportation services. Many of the elderly have no car or drivers license and are dependent upon others for daily transportation. Fourteen percent of the respondents mentioned home meal programs and another 14 percent mentioned home nursing care. Given that transportation is a problem for the elderly, it is difficult for many to attend congregate feeding programs and other programs that require travel. Increased sensitively should be given to the transportation needs of the elderly.

Increased sensitively should be given to the transportation needs of the elderly.

When asked about local service programs, 20.5 percent of the elderly report that they were unaware of these programs. This survey also reveals that certain subgroups, particularly Black males, were unaware of some of the services available to them. The report advises that elderly who are poor, homebound, Black and without transportation are the ones who would benefit most from improved services. Not surprisingly, the elderly in Detroit are more in need than are those in the surrounding suburbs.

Minority Elderly

The U.S. Bureau of the Census reports that more than one-third of Blacks 65 and over were poor. Blacks over 65 were three times more likely to be poor than were their White counterparts.[7] More than one-half (55.1 percent) of all Blacks 65 or older regard their health to be only fair or poor, as compared to 33.1 percent of older Whites. Poor health is more likely to restrict the health of older Blacks than older Whites (43.4 vs. 30.8 restricted days/year).[8]

The report from the State of Michigan Office of Services to the Aging compares the health status of Blacks and other minorities to that of the White elderly for the state.[9] As found nationally, those who are minority members or on a limited income were more likely to suffer poor health and to have poorer access to health care. Those at or below 125 percent of the poverty level reported a higher incidence of all illnesses or risk factors, except obesity, than did those with higher incomes. Black elderly were much more likely to experience anemia, diabetes, allergies and hayfever, and hypertension than were White elderly.

Access to Health Care

According to the report from the Office of Services to the Aging, almost all (96 percent) of the respondents report that they are covered by health insurance. Ten percent report coverage from Medicaid, 13 percent from Medicare plan A only and 55 percent from Medicare A&B. Only 72 percent have insurance to supplement their coverage from Medicare. Those in poverty and minorities were most likely to indicate that they could not receive good medical care. Furthermore, minorities and the poor were more likely than other elderly to report using clinics and other "impersonal" forms of care. It is encouraging, however, that Blacks, other minorities, and the poor were more likely to have had a general health checkup in the previous six months than were other groups. Thus, in this instance those with greater need do show a greater use of the health care system.

Programs

Food programs

The Title III C congregate and home-delivered meal programs, which are funded by the Older Americans Act, provide nutritional and health education to individuals 60 and older throughout the state via 14 area agencies. These programs receive 75 percent of their funding from federal dollars and 25 percent from state funding.

In many areas, people are on waiting lists for home-delivered meals.

The number of meals provided is limited and this program cannot serve all of those in need. Furthermore, no transportation is provided to take the elderly to the congregate feeding sites. Since many cannot travel to the feeding sites, the number of elderly who require home-delivered meals is especially great. In many areas, people are on waiting lists for home-delivered meals. Nevertheless, there are fewer funds available for this service than for congregate meals.

Social Services

Title III B social services, which are also funded by the Older Americans Act, provide adult day care, health screening, chore services, home repair, transportation and personal care. The funds for these services are also very limited and cannot meet the demand. As noted in the Needs Assessment report, many seniors require assistance with chores and daily activites. Without such assistance, many are forced to become dependent upon others or move into nursing homes. Some elderly on Medicaid, however, have difficulty being admitted to a nursing home due to lower payment rates.

Therefore, for many poor elderly who require assistance in daily activities and self-care there is no source of relief or help.

Families who care for the elderly also benefit from services such as adult day care, transportation chore services and other activities which relieve the caregiver from some responsibilities and provide respite time. This is especially important since many of these caregivers are themselves older[10] and do not have the energy or health required to provide constant care to another.

Studies show that social support of family, friends and church members is extremely important to elderly Blacks particularly those of lower income.[11] These supports have been shown to be important for daily activities as well as for participation in local and federally provided services. Government agencies, social workers, etc. should use churches and the clergy as liaisons between service organizations and the elderly. It is also recommended that the government support and encourage those groups that foster friendships among the elderly (e.g., Senior Companion Program, Foster Grandparent Program, Retired Senior Volunteer Program). Furthermore, programs that provide the elderly with in-home assistance (e.g., Meals on Wheels and Home Health Care Services) should be encouraged since they allow elderly persons who might otherwise be institutionalized to remain in the community.

Programs that provide the elderly with in-home assistance should be encouraged since they allow elderly persons who might otherwise be institutionalized to remain in the community.

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Section IV

SYSTEMIC ISSUES

Chapter Fourteen

ACCESS TO CARE

Minorities in Michigan and in the nation do not have adequate access to health care. Minority individuals suffer from poorer health status according to measures of premature mortality and excess morbidity. They are less likely to have seen a physician in the last year and use proportionately far fewer physician visits than do non-minorities.

Between 1982 and 1986 the over all use of medical care declined considerably, as measured in terms of hospital care and per capita physician visits.[1] The decline in access to physician care was particularly evident for those who were poor, Black or in ill health. The Black and Hispanic populations continue to receive proportionately less hospital care than would be appropriate for their poorer health. "Technological advances have not significantly benefited minority populations," the Ohio Governor's Task Force on Black and Minority Health concluded, "because of barriers to early access to the health care delivery system. The economically disadvantaged have limited access to care. Minorities are disproportionately poor."[2]

Contrary to what might be assumed from the extensive discussion about the *over use* of medical care, research indicates serious *under use* of key medical services by minorities. Minorities tend to be poorer and sicker than the population as a whole.[3] The distinctive cultures of minority populations must also be taken into account when the issue of access to care is addressed. In the discussion that follows, three types of barriers to health care for minorities will be presented: 1) physical/geographic, 2) financial/economic and 3) cultural/structural.

Physical/Geographic Barriers

Physical barriers are when a service is not located in geographic proximity to the prospective patient or not available in sufficient quantity to the patient if all other barriers were removed. Although we lack a quantitative measure summarizing all features of access (geographical, financial, social, ethnic, cultural),[4] components of physical access have not only been quantified, but national standards have been devised. The principal components considered are travel time, appointment lag time, and office waiting room time.[5] Under most circumstances, a source of primary care should be within 30 minutes travel time, appointments should be available within one week of calling, and waiting time should be no longer than thirty minutes. These standards were developed using national averages and provide a quantitative indicator by which to measure physical access.

The availability of hospital care is also of concern. An important measure of the availability of hospital care might be the occupancy levels for existing hospitals or more specifically the ratio of hospital days available per thousand population to hospital days used per thousand population.

Data needed to assess physical access in Michigan include, lists of medically underserved and health professional shortage areas in the state, location of significant numbers of minority populations, rates of automobile ownership, hospital bed availability and hospital occupancy rates.

Shannon and Bashshur in a study of physical access among Native Americans in Detroit found that on the average respondents to their survey experienced less travel time and shorter waiting time for appointments than the national standard. Office waiting time, however, was somewhat longer than the national standard.[6] The overall index of physical access (a weighted average of these three factors) was somewhat more favorable than the national standards. Nevertheless, 11 percent of respondents were dissatisfied with the travel time to the physician, 25 percent were dissatisfied with the waiting time for an appointment and 48 percent were dissatisfied with the in office waiting time. National data indicate that both Blacks and Hispanics experienced significantly longer office waiting time than did Whites and were somewhat more likely than Whites to spend more than thirty minutes in travel time to their usual source of care.[7]

National data indicate that both Blacks and Hispanics experienced significantly longer office waiting time than did Whites.

Physical access to health care appears to be relatively good in many parts of the state. In rural areas, patients may have long distances to travel to providers. In urban areas, many minorities are dependent on public transportation, the costs of which can be a major barrier to access to services. In Wayne County, a program has been initiated

to provide taxi tokens to low income pregnant women in need of prenatal services. Other programs reimburse clients or friends of clients for the costs of transportation. Such programs are needed in other parts of the state. Limited service hours and difficulties faced by parents who need baby sitting assistance in order to access care are also related barriers to access.[8]

Physical access to providers is especially problematical for migrant workers and their families, the majority of whom are Mexican American. Long work hours and the mobility of these families makes keeping of appointments difficult.

Financial/Economic Barriers

Since the mere presence of adequate health care services does not insure access, other types of access barriers must be considered. As stated in the *Ohio Task Force Report on Black and Minority Health*, "The first major barrier to health care access is financial. The poor, often unable to afford early intervention, postpone care until disease processes are at a critical stage when the possibility of survival is minimized."[9] The loss of productive years of life is enormous.

The Medicaid program has done much to address the health care needs of the poor. Community Health Centers and Migrant Health Centers provide primary care in many communities. National Health Service Corps physicians have been placed in areas with a shortage of health professionals. Nevertheless, the resources provided these programs fall far short of the need and economic deprivation remains a significant barrier to the receipt of health services.

The ability to pay for health services is one of the most important factors determining their use.

Economic factors create barriers to health care in at least three ways. The most obvious is that persons unable to afford health care often do not seek it until forced to do so by the severity of the illness. Second, providers of health care are often unwilling to provide services to persons with no means to pay or who rely on public programs like Medicaid. Third, treating illness at an advanced stage is almost always much more expensive than preventive care or early intervention. This poor use of resources places strains on the entire system and reduces the amount of resources available to subsidize the care of poor people; it also shrinks the size of the delivery system, making fewer resources available to the entire population.

The ability to pay for health services is one of the most important factors determining their use. Since the inability to pay is a major barrier to health service delivery, the fact that the uninsured experience serious problems in obtaining needed medical care is not surprising. A 1982 Harris survey found that the uninsured use less medical services, especially physician visits with uninsured Blacks

TABLE 14-1

Distribution of Respondents with No Insurance and Uninsured Rate, by Race, Michigan, 1986.

RACE	SURVEY SAMPLE	WITH NO INSURANCE	UNINSURED RATE
All Races	100.0%	100.0%	10.9%
White	83.3%	80.6%	10.5%
Black	11.7%	12.3%	11.4%
Hispanic	3.0%	3.8%	13.6%
Other	2.0%	3.3%	18.3%

Source: The Uninsured Population in Michigan: Size and Characteristics of the Population Without Public or Private Health Care Coverage in 1986, Michigan League for Human Services Issue Analysis, January 1988.

ranking last in rates of use.[10] The Robert Wood Johnson's Special Report on Access to Health Care[11] found that in 1986 twice as many uninsured people as insured people had no regular source of medical care. The report found that 10 percent of Blacks and 20 percent of Hispanics were uninsured compared with 7.5 percent of the non-Hispanic White population. The Michigan League For Human Services in its 1986 study of the uninsured in Michigan found uninsured rates of 11.4 percent for Blacks, 13.6 percent for Hispanics, and 18.3 percent for other minorities compared with a rate of 10.5 percent for non-Hispanic Whites (Table 14-1).[12] With the continuing problem of plant closings in Michigan, concern about loss of health insurance coverage by many workers is growing.

In a national sample of Black adults, uninsured respondents were more likely to believe that it was difficult for them to receive care and that the care they were receiving was inadequate.[13] The uninsured respondents were also less likely to use physicians in private practice. In general the uninsured used fewer health services, especially when measured in terms of physician visits per year.

Guendelman and Schwable, in their study of Hispanic children, found that both low income and poor insurance coverage decreased the children's use of preventive care and physician utilization.[14] Black children were four times more likely and Hispanic children were three times more likely to come from families earning less than $7000 per year as were White children. Far fewer minority children came from families earning over $24,000. For Black and Hispanic children, entry into the health care delivery system was inversely related to family size. The greatest enhancers of entry were income and Medicaid coverage. For White children, health status was significantly more important in predicting entry into the health care delivery system. Public insurance appeared to be the single most important facilitator of entry for minorities who lack adequate health coverage.[15] Income was another important facilitator which was much more powerful for minorities than for Whites.

The best predictors of the volume of health services used were health status and age of the child (with older children receiving less care). Socioeconomic factors were significant boosters of the volume of health services used for minorities, but they were not as important as the need factors.[16]

Another set of barriers often overlooked are related to the nature of third party reimbursement plans which are usually based on standards derived from the population as a whole. Minorities are often significantly sicker than non-minorities who present themselves for treatment with the same diagnosis. Consequently providers are often paid proportionately less for the services provided to minorities. The long-term effect of this policy for providers who see a significant number of minorities as patients may be a choice between reduced income or providing less than optimal care. Evidence of the negative impact of current payment mechanisms is the growing number of Michigan physicians who will not accept

Medicaid patients and the disappearance of the traditionally Black hospital. Both trends limit the access of minorities to needed health care. In order to obtain equity in access for minorities, health care payment mechanisms must be reviewed with regard to the special circumstances of minority patients.

A finding of both the Robert Wood Johnson Report and the Neighbors and Jackson study is that the Emergency Room (ER) is seen by the poor, minorities and the uninsured as a source of care with relatively few barriers. This leads to inappropriate use of one of the most expensive sources of ambulatory care.

An increasingly important factor influencing the decision of providers to provide care in Michigan and especially in Wayne County (the county with the largest percentage of minorities) is the high rate of medical malpractice liability insurance. Hospitals in Wayne County pay the highest medical malpractice rate per occupied bed in the nation. Physicians (particularly those in the higher risk specialties) in Wayne County, are paying the highest rates in the state and in some instances the nation.[17]

Cultural/Structural Barriers

Cultural acceptability of services is an issue that must be considered in attempts to enhance minority access to the health care system. The health care delivery system has evolved with partial and inadequate participation by minority communities. Until quite recently, the health care system in Michigan was largely a segregated one. Even today, according to the Ohio Task Force on Black and Minority Health, "most health services today are planned, designed, and implemented in a manner which excludes the values, beliefs and attitudes of the minority community." "This lack of cultural sensitivity by the health care system," the Ohio task force concluded, "results in treatment and care being provided in a context that lacks meaning for minorities." The result is outcomes which are "less than optimal."[18]

The health care delivery system has evolved with partial and inadequate participation by minority communities.

One apparent consequence of cultural/structural health system barriers is that Black children make much less use of the health care delivery system than do their White counterparts.[19] This occurs despite the poorer health status of Black children. Modifications in the system can lead to improved access, however. Orr, Miller and James[20] found that when a delivery system was expressly designed and operated in such a manner as to diminish or eliminate structural barriers, Black children made equal or greater use of health care services than did White children. Among the structural modifications in this study were expansion of office hours, follow up of patients, and inclusion of minority individuals as staff members. These findings strongly indicate that structural barriers are

significant determinants of the use of health care services, and that culturally related barriers can be overcome. The study did not take into account children who never entered the delivery system. It may well be that cultural barriers are more powerful in the decision to seek entry into the system.

Berkanovic and Telesky[21], and Harwood[22] contend that differences in health care utilization may be the result of culturally determined patterns that were developed in response to a specific need or situation.[23] For decades after slavery, mainstream health care was usually not accessible to Blacks, primarily because of discrimination. Washington[24], for example, states that Blacks in Detroit in the 1920s had access to hospital clinics, but were able to use hospital beds only in obstetrical cases. Although many of these barriers no longer exist, many Black Americans continue the traditional practices of health seeking behavior.

Language is a significant barrier to health care, particularly for those who are foreign born.

Hispanics face a number of cultural and structural barriers to care. Language is a significant barrier, particularly for those who are foreign born. Spanish speaking Hispanics are especially likely to have no regular source of medical care. In addition, many Hispanics from rural areas are unfamiliar with delivery of services in small and large cities. Furthermore, it has been found that Hispanics use preventive health care measures and medical examinations less than others.[25] Key Hispanic informants surveyed by the Department of Mental Health emphasized the importance of bilingual/bicultural staffing of health services if these services are to be accessible to Hispanics.[26]

Structural and cultural problems with access to care are problems for Native Americans. The *Report of the Director's Indian Health Task Force* noted that the "many resource providers, both private and public, mistakenly assume that Indians are solely the responsibility of . . . the Indian Health Service."[27] The Indian Health Services's (IHS) Kincheloe Health Center and the IHS-supported tribal health centers provide health services to only one sixth of the Michigan Indian population. The Detroit Indian Health Center is an IHS funded urban Indian health facility. Its resources for reaching the substantial urban Indian population in southeast Michigan are limited. The Indian Task Force report also noted a number of other access problems facing Indians:

> *. . . insufficient numbers of trained Indian health professionals; discrimination or cultural insensitivity by non-Indian providers toward Indians; inadequate Indian outreach; and lack of knowledge and sensitivity toward Indians by State and local health department staff.*[28]

Refugees and immigrants from Southeast Asia are another group with special access problems. Language difficulties are a barrier to care and there appear to be delays in seeking access to care.[29] The number of immigrants from Southeast Asia arriving in Michigan between 1975 and 1985 has been estimated at 10,500.[30] The heavy

influx of immigrants in Arab American communities in Michigan has led to similar access problems for this population.[31]

If health professionals recognize cultural variables as they apply to various ethnic groups, health programs can be more appropriately tailored to the needs of the minority community. For intervention strategies to work in minority communities, professionals must be aware of what the client is likely to be thinking and have a broad understanding of the term health. They must also understand how health is likely to be understood by the communities in which they are working, understand the factors that influence health status, and realize the powerful, lingering effects of discrimination on minority communities.

Other Issues

The discussion of access inherently assumes that each person is somehow tied to a physical location. Location or home serves as the reference point from which we make the determination of whether the individuals' needs are being met and from which corrective action is taken. In Michigan, as around the country there is a growing segment of the population that is not counted and not considered—the homeless. While there are no "good" figures, estimates of the number of homeless in the state vary from 10,000 to more than 25,000. These citizens are disproportionately minority. In the Detroit area, it is estimated that 79 percent of the homeless are Black, 3 percent are other minorities, and 18 percent are White. It is estimated that approximately 25 to 30 percent of the homeless have psychiatric problems which make it difficult for them to operate a conventional household. The homeless are predominately a young population. The Detroit data indicate that almost 30 percent of them are children under the age of 13. Another 6 percent are between the ages of 13 and 19. The great bulk of the homeless (49 percent), are aged 20 to 44. Thirteen percent are between 45 and 64, while 3 percent are 65 or over. Almost 55 percent of the homeless are male. Female single parents and their children comprise 32 percent of homeless individuals.[32] The homeless carry with them a great burden of medical problems such as hypertension and chemical dependency.

In Michigan, as around the country there is a growing segment of the population that is not counted and not considered—the homeless.

Conclusion

As the Governor's Task Force on Access to Health Care approaches the question of providing for all in need, it will of necessity focus on the problems of minorities. Among the deficiencies affecting minorities that must be addressed: the problem of entry into the health care system by the uninsured and inadequate access to care

by children. Plans for universal coverage of all residents are being considered by a number of states and should be considered by the Michigan task force. Public programs such as Medicaid, the Community Health Centers, Migrant Health Centers, and the National Health Service Corps have been a major vehicle for expanding health care coverage for minorities. The growing racial disparity in health status requires renewed effort at improving access to care for minorities in Michigan.

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Chapter Fifteen

JOBS AND EDUCATION

Economic Background

The economic deprivation experienced by minority communities underlies many of the health problems which these communities endure. In their review of the literature on the impact of socio-economic position on health status for the Secretary's Task Force on Black and Minority Health, Haan and Kaplan conclude that a significant portion of the minority/White differential in health outcomes can be explained by differences in socio-economic position.[1] They cite studies of all-cause mortality, survival differences in cancer of the breast and prostate, male lung cancer incidence, mortality of coronary heart disease, and infant mortality which show a significant reduction in the racial differentials when socio-economic position is taken into account.

Historically, minority groups have experienced discrimination that has placed a disproportionately large segment of their members in depressed economic situations. Although the specific forms of discrimination experienced by each minority group varied, systematic segregation in jobs, housing, education, and health care continued into the twentieth century and was a common reality endured by all minority groups just a generation ago.

In the wake of the civil rights movement of the 1950s and 1960s, many forms of institutionalized segregation in public accommodations, education, and health care delivery have been eliminated and progress was achieved in a number of areas. Between 1966 and 1975, there were significant increases in the Black share of employment in many job categories, especially officials and managers, professionals, technicians, sales workers, office and clerical workers, and craft

workers. Since 1975 the Black growth in these job categories has only been modest and parity was achieved only among office and clerical workers.[2] Even after the progress resulting from the civil rights movement, 1980 Michigan census data showed a three to one racial gap in poverty rates and a two to one gap in unemployment rates. The 1980 Michigan unemployment rates of 21.5 percent for Blacks and Native Americans and 17.4 percent for Hispanics in 1980 can only be characterized as depression-level (See Tables 1-3 and 1-4).

Some economic indicators show not only a slowing of progress but a regression in the status of minorities in recent years.

Some economic indicators show not only a slowing of progress but a regression in the status of minorities in recent years. Since 1975, the overall share of Black employment declined despite the relative increase in the Black population.[3] Minority groups have been more severely affected than have Whites by the erosion of jobs in the manufacturing sector. Unemployment rates have continued to rise for minority group members in the 1980s despite an overall improvement in the unemployment rate for the state as a whole. Unemployment was deemed the most serious problem facing Hispanic communities according to the results of a survey of forty key Hispanic informants conducted by the Michigan Department of Mental Health.[4] The continuation of de facto discriminatory barriers, the resistance to further progress in the civil rights arena via affirmative action programs, inadequate and unequal funding of public education, and structural changes in the economy appear to have led to a regression in both the absolute and relative economic status of minorities in Michigan. At the same time, informal mechanisms of exclusion and discrimination limit the growth of minority participation in higher paid job categories.

Economic Situation of Minority Youth

The deteriorating economic situation facing minority communities has been especially devastating for minority youth. The Black youth unemployment rate in Michigan has not dropped below 50 percent since 1980 and has reached as high as 68.3 percent in 1983. Black youth unemployment rates in the 1980s have been between 2.3 and 3.7 times as high as White youth unemployment rates.[5]

Education

The quest to educate children has been an historic feature of the struggle for a better life throughout United States history. Progressive advances have occurred: the establishment of a system of universal public education in the nineteenth century, the elimination of legal racial segregation in public schools in the mid-twentieth

century, the widening of minorities' access to higher education through the establishment of affirmative action programs and other measures in the 1960s and 1970s. Thus the minority proportion of undergraduate enrollment in Michigan four year public colleges and universities increased from 6.6 percent to 11.3 percent between 1970 and 1976. In private colleges and universities, there was an increase from 6.3 percent to 15.5 percent in minority enrollment during this period.[6]

The gains of the civil rights period led to an improvement in the educational achievement of minority groups but they failed to eliminate discrimination in the application of societal educational resources. As in the economic realm, a regression has occurred in the past decade in the educational arena and the racial gap has again been widening. The minority proportion of undergraduate enrollment in Michigan schools decreased from 11.3 percent to 10.5 percent in four year public colleges and universities between 1976 and 1986. In private colleges and universities, the proportion dropped from 15.5 percent to 13.2.[7] The proportion of minorities enrolled at the graduate levels has also declined.

An indication of the racial gap in secondary education is the fact that students from all minority groups except Asian Americans are more likely to drop out of school than are White students. Especially troubling is the fact that Michigan drop out rates have increased significantly for Blacks and Hispanics in the 1980s. The annual drop out rate for Blacks in ninth to twelfth grade increased from 7.8 percent to 12.0 percent between 1981-82 and 1985-86 (Table 15-1). For Hispanics, the rate increased from 9.6 percent to 10.9 percent. The rates for Blacks and Hispanics are more than twice as high as the rate for Whites (4.5 percent in 1985-86), which has remained essentially stable in the 1980s. The impact of such high annual drop out rates is that nearly half of Black and Hispanic youth entering ninth grade do not complete their high school education. Key Hispanic informants in the survey conducted for the Department of Mental Health identified dropping out of school as the most serious problem for Hispanic adolescents. "School was often described as an environment that devalues the Hispanic child's cultural background," the survey report explains, "and is at times outright hostile about the child's cultural and linguistic differentness."[8]

The systemic problems of high unemployment levels for minorities and inequality in the educational arena are related. Jobs at decent wages are a vital factor in family formation and stability. A supportive family environment and hope for a future are both important factors in educational success. Efforts need to be made at the national, state, and local levels to provide jobs, to support families, and improve the educational system and its accessability and sensitivity to minority needs at all levels. A number of positive initiatives are taking place in Michigan to address these critical systemic problems.

TABLE 15-1

Number and Percentage of High School Students Dropping Out of School Per Year by Race/Ethnicity, Michigan, 1981-86

RACE/ ETHNICITY	SEP 81–JUN 82 NO.	%	SEP 83–JUN 84 NO.	%	SEP 85–JUN 86 NO.	%
American Indian	289	6.8	294	6.3	246	5.9
Asian American	69	2.6	122	3.7	87	2.3
Black	6,232	7.8	8,859	11.7	9,069	12.0
Hispanic	693	9.6	721	10.2	810	10.9
White	20,524	4.7	16,964	4.2	17,592	4.5
Total	27,817	5.2	26,960	5.4	27,804	5.8

Source: Unpublished data, Michigan Department of Education.

Nearly half of Black and Hispanic youth entering ninth grade do not complete their high school education.

Michigan Youth Corps

Established in 1983 by the Michigan legislature, the Michigan Youth Corps is the largest state-funded summer job program in the nation. Its goals are to provide employment for youth who otherwise might not have the opportunity for summer employment, in order to give them work experience that might lead to a permanent job. The Michigan Youth Corps is an open program, that is, any unemployed Michigan resident between the ages of 18 and 21 who applies is given a job, if one is available. First preference in hiring is to find jobs for persons who live in households headed by an unemployed person. Second preference is to find jobs for the oldest applicants.

Since it first began, over 95,000 Michigan youth have participated in the program. Nearly half of the participants have been members of minority groups. About 44 percent of participants were Black, 2 percent were Hispanic, 1 percent were Native American, and less than 1 percent were Asian and Pacific Islanders.[9]

The Michigan Youth Corps employed approximately 22,000 of the 86,000 young persons who were jobless in the summer of 1987. This was the first summer that sufficient funding had been allocated to provide jobs for all of the applicants; every eligible person who applied on time was offered a job.

Traditional work values are the number one job priority for Youth Corps participants.

All Michigan Youth Corps jobs are full-time; the average job lasts eight weeks. Jobs are diverse, and range from working in offices to state parks to day-care centers. Participants are assigned to projects sponsored by both government and educational institutions, as well as public and private non-profit agencies. The hourly rate for Michigan Youth Corps participants is $3.35 and for supervisors it's $5.50; both are hired for the same projects.[10]

To assess the impact of the Michigan Youth Corps, the Department of Labor commissioned the Louis Harris and Associates, Inc. to conduct a poll of 1987 participants.[11] According to the Harris report, traditional work values are the number one job priority for Youth Corps participants. Among the youth who were polled by Harris, some 98% said the Youth Corps had met their highest expectations in providing the opportunity for responsibility; 97% thought the opportunity for teamwork and completing a project was a valuable experience. Over one-half the Youth Corps participants landed a permanent unsubsidized job shortly thereafter, and another one-third have entered an educational or vocational training program.[12]

Youth Corps participants reported they liked the people and work, the experience of learning new skills and the opportunity to earn money. "Having responsibility" was the primary expectation before entering the program and the major fulfillment after completing the program. "Learning how to organize oneself for work" was the second expectation, as well as the second source of satisfaction with the program. Regarding the aspirations of participants, 51%

reported that they wanted to go to college, 26% were looking for a full-time job, 12% were attending high school or technical school, and 6% were entering the military or studying and working part-time.[13] The Harris report concluded, "There is little doubt that the Michigan Youth Corps program could well become a prototype of what other states, the federal government, and the private sector can hope to emulate."[14]

There has been a recommendation to incorporate a health component into the Michigan Youth Corps that might include health and nutrition education as well as health screening. Since poor health and nutrition hinder young people in their school activities as well as other facets of life, it makes sense to include a health component in the Michigan Youth Corps.

Michigan Civilian Conservation Corps

Patterned after the Depression-era Civilian Conservation Corps, the Michigan Civilian Conservation Corps was established by state legislation in 1984. Its goals are to improve and protect Michigan's natural resources and to offer a positive as well as educational work experience for economically disadvantaged youth between the ages of 18 and 25.

Since 1984, about 2,800 young people have been employed in the Michigan Civilian Conservation Corps; many of these were minority youths. The Department of Natural Resources sponsors most of the projects in which the Michigan Civilian Conservation Corps participates. Sixty Michigan counties have Corps sites, accommodating about 150 different projects throughout the State. Corps participants are engaged in projects involving trail development, construction and maintenance, and secretarial work. The term of employment runs year-round.[15]

Participants in the Michigan Civilian Conservation Corps are encouraged to take advantage of job counseling and training opportunities.

All of the participants in the Michigan Civilian Conservation Corps are encouraged to take advantage of job counseling and training opportunities; they are given ten paid days of vacation per year for these activities. To date, ten pilot education sites have been established where Corps members can further their education. Many are working on General Education Diplomas, and a few are working on reading proficiency. At least 66% of Michigan Civilian Conservation Corps participants who have left the program have found new jobs.

There are 46 year-round Corps-type programs across the country. All but two are conservation-oriented, and most are state-wide programs. Michigan is the only state in the United States having a program which targets public assistance recipients. The 5.4 million

dollars from the state allocated to the Michigan Civilian Conservation Corps ranks fourth behind similar programs in Pennsylvania, California and the City Volunteer Corps in New York City.[16]

Education Programs

The Michigan Department of Education received a general education grant in 1985-86 for an Early Childhood Education Pilot Project whose goal was the academic preparation of four-year-olds at risk for academic failure. Some 694 at risk four-year-olds participated in eighteen different programs across the state. Refunded the following year, several new programs were implemented in ten additional districts in 1986-87, and three collaborative models also were developed. Approximately 186 additional children were served by these new programs.[17]

Although each program in the Early Childhood Education Pilot Project was structured along the same lines, variations in the different programs were tailored according to the individual school district. For purposes of selecting the children, some form of assessment test was given such as the Denver Screening Test, Gesell School Readiness Test, Peabody Picture Vocabulary Test or Stanford Preschool Internal/External Scale. Observations of the children in a school-like setting also were incorporated in the selection process in one way or another. The number of staff working with the various programs ranged from four to eight, and generally included one or more teachers and paraprofessionals, a social worker, as well as parent advocates. Besides classroom training, the children involved participated in home training sessions after parent/teacher orientations had been held. Post-program evaluations were conducted using such tests as the DIAL R, Caldwell Preschool Inventory and Haslett Development Center Skills Checklist. The overall project currently is compiling information from the various phases of the evaluation component, and a report is being prepared to assess the program's impact. Although not currently funded, the objectives of the pilot project will be continued through a series of Early Childhood Development Grants in the next school year.

The Detroit Compact, created by Governor Blanchard in 1987, has as its goal post-secondary school support of Detroit high school graduates. The plan calls for public scholarships in combination with corporate contributions in order to assist young people to receive full financing for college and post-secondary training, as well as job and career counseling for graduates. The program is located in Detroit and is operated through the Department of Commerce, Detroit Public Schools, New Detroit, Inc. and Wayne State University.[18]

Cabinet Council on Human Investment

The Cabinet Council on Human Investment was formed in the spring of 1987 by Governor Blanchard to develop and coordinate a comprehensive strategy for the education, training, and retraining of Michigan's present and future workforce to best prepare them for the jobs of today and tomorrow.

One of the Council's first initiatives has been the creation of the Adult Literacy Task Force, a joint venture with IBM and key state departments to develop recommendations for improving the workforce literacy of Michigan's present and future workers. Task Force members conducted an extensive study and interview process, capitalizing on the information obtained from the Council's involvement in a year-long ten-state national literacy academy to develop state policy. The resulting eight recommendations include a new definition of workforce literacy, building on the State Board of Education's new definition of reading.

In another related area, the Council's efforts with the Iacocca-Fraser Commission on Jobs and Economic Development has led to a task force whose charge is to identify the basic skills workers need for jobs in the future. Their first task is to examine issues relative to establishing job skill standards for both academic and work employability.

The Michigan Opportunity Card . . . will help every adult get the assessment and training needed to be competitive in the job market.

The Cabinet Council, in partnership with the Governor's Office for Job Training and the Michigan Job Training Coordinating Council, is spearheading a major new initiative—the Michigan Opportunity Card. The Card will help every adult get the assessment and training needed to be competitive in the job market, and choose where those services will be obtained. The card eliminates negative labelling of persons; all adults will have cards, with magnetic strips containing pertinent individual information. The Card—along with the new workforce literacy definition to drive instructional change, the job skill standards to measure success, and a Policy Board to oversee the design and implementation of an integrated, outcome-oriented adult training, education and supportive services system—will create a system to meet the demands of the future.

The Council also is working with the Department of Social Services to establish public and private sector partnerships to find alternatives for helping dependent citizens acquire the necessary skills for employment. An outgrowth of such a partnership, the Ingham County Project was created to increase welfare job placement rates and decrease the cost per unit of placement.

A Neighborhood Restoration Corps, similar to the Michigan Civilian Conservation Corps, has been proposed. Its purpose would be to reduce high school dropout rates in urban areas by creating a

A number of studies have demonstrated that Head Start provides its graduates a better start in school.

work team of young people; the program combines job training with education. This proposal is now part of the Department of Commerce's Neighborhood Builders Alliance initiative.

Finally, the Council is working in conjunction with the Department of Education to get legislative adoption of the Governor's Educational Excellence Challenge. The Challenge includes preschool programs, teacher in-service, dropout prevention, performance standards, achievement incentives, choice, and core curriculum.

Head Start

The Head Start Program provides comprehensive parenting as well as social, health and educational services to low-income children aged 3-5. The Program is federally-funded and has been in operation in Michigan since 1965. At least 34 public and private sector non-profit agencies serve as grantees at the local level. Approximately 22,000 children participate in the Program each year.[19] Despite some initial controversy, a number of studies have demonstrated that Head Start provides its graduates a better start in school. The 1985 Head Start Evaluation, Synthesis, and Utilization Project, moreover, found a reduction in grade-retention for Head Start graduates and noted the significant help given by Head Start to families under stress.[20]

Perry Pre-School Project

The Perry Pre-School Project within the Ypsilanti public school system is a longitudinal research study of the impact of high quality early childhood education on disadvanataged children. The Perry project involves a developmentally appropriate curriculum and child-initiated activity. Selection for participation in the Perry Ypsilanti preschool project was determined by the family's level of poverty. On the average, the children who were selected came from families whose parents had at least a ninth grade education, were unemployed (42% had neither parent employed) and lived in crowded housing at a median of about seven persons in a five-room house. All of the families were Black; their children had cognitive abilities at age 3 that were below average for their socio-economic level.[21]

The Perry project is significant because its impact has been carefully evaluated. Project researchers collected data on its 123 Black participants and on a control group at several different points before, during and after the program.[22] They delineated important benefits that were derived from the Perry preschool project. Stu-

dents who participated in the Perry project later required less costly forms of education as they progressed through school. None required institutionalized care, and very few required special education. Children who participated in the Perry preschool program had significantly higher scores on measures of cognitive ability than those in a control group. The preschool children had higher scores on achievement tests in elementary school, at least until the eighth grade, and they received better ratings by elementary-school teachers, at least until the fourth grade.[23]

Conclusion

A number of efforts are underway to meet the needs of Michiganders in the critical areas of jobs and education. Programs that intervene at early stages of the lifecycle are especially important given the long term consequences of failure in the early years. Programs in the pivotal areas of employment and education are important ones for the state as a whole and especially for minorities who experience significant inequities in the economic and educational realms. The provision of good jobs with decent wages and fringe benefits enables people to participate in the health care system and is beneficial to the economy. Advancing toward equality in the economic and educational arenas would provide the public health community with a context in which to close the racial gap in health status.

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Section V

AREAS FOR INTERVENTION

Chapter Sixteen

SMOKING PREVENTION AND CESSATION

Smoking is a factor in many poor health outcomes. Among the most important are lung cancer, esophageal cancer, ischemic heart disease, stroke, low birth weight, and complications of diabetes. According to the Surgeon General's Report on Health Promotion and Disease Prevention, smoking leads to more preventable illness and death than any other single risk behavior. Specifically, the Surgeon General reports that smoking results in 320,000 premature deaths per year and debilitating chronic disease in 10 million Americans.[1]

Not only is smoking prevalence higher within minority than non-minority communities, the tobacco industry has targeted advertising toward both Blacks and Hispanics. These advertisements appear in magazines for minorities and on billboards in minority neighborhoods. Furthermore, cigarette companies sponsor entertainment and cultural events attended predominately by minorities and fund educational institutions that serve Blacks.[2] These efforts of the tobacco industry increase the urgency and need to combat smoking within minority communities.

Many in the smoking cessation field believe that such programs are most effective when they occur within established organizations such as work places, clubs, churches and hospitals.

Smoking Cessation Programs

General Recommendations

Although most smokers who have quit do so on their own, several evaluation studies of smoking cessation programs in Michigan have demonstrated success with outpatients,[3] members of community organizations[4], and pregnant women.[5] Research has also shown, however, that smokers are not likely to volunteer for a cessation program, especially if it involves time or financial costs. Many in the smoking cessation field believe that such programs are most effective when they occur within established organizations such as work places, clubs, churches and hospitals.[6] In this way, the organization's members are more likely to find out about the programs and can participate in them without making special trips to a new location. These considerations are especially important for minorities who often face considerable financial and transportation difficulties. Also, the cessation program can be developed and maintained more easily and successfully if it is a part of a preexisting organization, not an independent project. Additionally, the smokers' friends and acquaintances in the organization can provide the frequent social support many 'quitting smokers' require.

Studies, researchers and applied programs indicate that rewarding smokers for not smoking and providing alternate, healthful behaviors is more likely to lead to a reduction in smoking than punishing smokers or simply insisting that they stop smoking.[7] Furthermore, it has also been shown that programs designed for the needs of particular groups are more successful than programs aimed at a general audience.[8] This consideration is particularly important for minority groups since programs designed for a general audience tend to neglect the cultural experience and linguistic needs of minorities.

Smoking Cessation Classes and Clinics

Below are several examples of smoking cessation programs that were developed within preexisting organizations. One year quit rates for such programs rage from 20-30 percent.[9] In forming successful programs it appears that it is important to get the smokers to support the program. One way of eliciting support is to involve smokers in planning the program rather than planning the program for the smoker.

Some hospitals have developed programs that assist nurses, doctors and other staff to quit. For example, the Lehigh Valley Hospital

Center in Allentown, Pennsylvania has been providing cessation classes and incentives such as bonuses and savings bond drawings since October 1985 to encourage employees to stop smoking. This program was developed to help smoking employees prepare for the hospital's no-smoking policy which began in April, 1986. According to the hospital director, Jeffrey E. Burtaine, M.D., urine nicotine tests indicate that 27 percent of the 858 employees who smoked have quit as of October 1987.

Six months after implementation of an employee smoking cessation program at Group Health Cooperative of Puget Sound, 29 percent of the smoking employees reported smoking fewer cigarettes. The average number of cigarettes smoked per day decreased significantly by 2 cigarettes from 15.6 cigarettes per day. Furthermore, the employee support for the project increased. However, project researchers noted that few smokers took advantage of the smoking cessation classes that were provided. Unlike the Lehigh Valley program, the employees had less voice and participation in the project. Given that maintaining morale and unity in the work place is necessary for the implementation of any policy, the project researchers concluded that more steps should have been taken to involve the smokers in the planning.[10]

The American Lung Association (ALA) provides smoking cessation clinics through local hospitals and clinics. These programs are offered in a large number of communities and have a one year quit rate of approximately 20 percent. The ALA provides training to those who wish to become group leaders for the clinic. Training minority individuals as group leaders strengthens the ability of such programs to serve minority communities. For example, an Upper Peninsula clinic run by a Native American was successful in serving Native Americans. According to a Northern ALA representative, this program was successful because the program educator was able to involve the tribal community and gain its support for the program.[11]

Nicorette, a sugar-free gum containing nicotine, is another technique to aid smokers to quit. This gum is only available by prescription and creates a blood nicotine level similar to that produced by one half to one cigarette. The gum helps to reduce nicotine withdrawal symptoms while eliminating the negative effects of carbon monoxide and tar. This gum, when used correctly, may be helpful for many persons who are quitting; but it is not to be used by pregnant or lactating women.

The Roswell Memorial Institute found that only five percent of gum users continue to use Nicorette after one year. The institute also found that this product is most effective when used in conjunction with clinics, programs and booklets designed for smoking cessation.[12]

Training minority individuals as group leaders strengthens the ability of smoking cessation programs to serve minority communities.

Programs Designed to Reach Large Numbers

Smoking cessation programs provide opportunities for smokers who are ready to accept assistance in quitting. Other approaches aimed at reducing smoking are mass media campaigns and counseling efforts by physicians. These efforts have the potential to reach a much larger group than smoking cessation clinics and programs. This larger audience compensates for the lower quit rates of approximately 6-15 percent for these programs as compared to the higher rates of those programs that provide more individualized attention.[13]

Mass media campaigns

Mass media campaigns are a useful approach to smoking reduction. Mass media campaigns have a considerable potential impact since they reach many individuals who are not otherwise exposed to smoking cessation messages such as the unemployed, homemakers, and others who may have limited contact with organizations.[14] The results of several studies support the usefulness of mass media campaigns. For example, Warner[15] estimated that anti-smoking public policies and media publicity that followed the 1964 Surgeon General's report had a cumulative effect of reducing the 1975 per capita cigarette consumption by 20 to 30 percent. In a current review of 40 mass media campaigns, Flay[16] reports that campaigns designed to provide information on smoking have been shown to be effective in changing the attitudes, beliefs and behaviors of smokers. This review reveals, furthermore, that the more effective campaigns contained the following factors:

Mass media campaigns have a considerable potential impact since they reach many individuals who are not otherwise exposed to smoking cessation messages.

1) Temporal endurance
2) Several, varied announcements
3) Frequent exposure
4) Presentation on many media during 'prime time' to insure widespread dissemination

For example, USA Counteradvertising continued for three years and had one Public Service Announcement for every three to twelve cigarette commercials. The mass media have been used not only to provide information on the health risks of cigarettes but also for televising self-help smoking cessation clinics. Such efforts are cost-effective since they reach people who might not be able or wish to attend face-to-face clinic programs. Flay concluded that such programs are helpful if coordinated with written materials, televised group discussion and community organizations.

The Role of Physicians

While some smoking intervention programs do have substantial quit rates, these programs do not reach all people. One source of help that has potential to reach many smokers is the physician. Physicians have regular contact with many smokers and the information that they provide is highly credible to most patient.

Studies have shown that a physician's advice to quit may have some impact on a smoker's behavior even though the messages are frequently brief.[17] Furthermore, according to the American Cancer Society, smokers report that they would attempt to quit if a physician requested that they did so.[18]

Although physicians do perceive smoking to be an extremely serious health problem, there is some debate as to whether physicians advise all patients who smoke to quit.

Although physicians do perceive smoking to be an extremely serious health problem,[19] there is some debate as to whether physicians advise all patients who smoke to quit. For example, in a national study, only 65 percent of physicians questioned report that they advise all patients to quit smoking. The remaining thirty-five percent report that they only counsel patients on smoking if it poses an immediate health problem.[20] Similar results were found in a Michigan study in which only 44 percent of the smokers in the study report that their physician had ever advised them to quit smoking. Furthermore, in this study, Black smokers were less likely than Whites to report that they had been advised to quit (35 vs. 45 percent) despite the relatively high incidence of smoking-related problems within this group.[21]

Surveys indicate that physicians may be reluctant to advise the patient to quit smoking because they perceive that their counseling is not effective. Physician counseling on smoking cessation does have a relatively low success rate of two to five percent.[22] This is not surprising given that the counseling that is done is often brief (approximately two minutes) and usually does not involve further aid or information (e.g., a referral or pamphlets). Nevertheless, even a two percent success rate would have a sizable national effect if all physicians were to counsel their patients to stop smoking.

Anda et al. suggest that physicians may become able to provide additional assistance to their patients if reimbursement structures were changed.[23] Currently, third-party payers do not pay doctors for health education. Reimbursing physicians for patient education would encourage doctors to provide assistance and counseling to patients for smoking cessation as well as many other health problems.

Community-Based Programs for Smoking Prevention/Cessation

Several programs have been developed to attack smoking on the community level. Two such programs are the Pawtucket Heart Health Program and the Minnesota Heart Health Program.

The Pawtucket Heart Health Program (PHHP) is a research and demonstration project funded by the National Heart, Lung and Blood Institute. It is aimed a predominately blue-collar community in southeast New England. The smoking rate in this area is high at 43.4 percent. Initial efforts to enroll smokers in smoking cessation clinics through local organizations such as worksites and churches drew only 31 participants. In order to attract a larger number of smokers, those who attended the clinic were entered into a lottery. The lottery was advertised by flyers and posters around the community and by promotions in newspapers and on radio. The lottery

Since most smokers begin smoking prior to age 21, smoking prevention in school children would significantly reduce the prevalence of smoking.

prizes were donated by local businesses. These strategies attracted 112 enrollees. Another successful recruiting technique used in the project was a two-day fair to promote the lottery during which smokers had one-to-one communications with health professionals. At this time, participants were given a choice to quit with self-help materials or to join a smoking cessation group. Through this strategy, the program gained 256 enrolles. The quit rate for the total program is estimated at 14-25 percent. While the program evaluators feel that this quit rate is slightly low, they recommend the broad-based community efforts and incentives to recruit smokers rather than the small risk-reduction clinics. [24]

The Minnesota Heart Health Program (MHHP) is a 10 year research and demonstration project of population-wide primary prevention of cardiovascular disease which includes reduction of risk factors including cigarette smoking, blood cholesterol and high blood pressure. Programs are located in three areas in each of three states–Minnesota, North Dakota, and South Dakota. This community-based approach is based upon the concept that behavioral habits are learned and influenced to a large extent by the surrounding culture. The project involves community groups, physicians and health professionals and provides risk factor screening programs and health education classes to the public. The education strategies also include media-based information, smoking cessation projects in schools, education for health professionals, and community-wide risk factor campaigns.

In Michigan, the Department of Public Health is funding several projects throughout the state that are modeled upon the Minnesota Heart Health Program. The Michigan projects are aimed toward women of childbearing age and children. These target groups were selected in order to have the greatest health impact. Reducing smoking during pregnancy leads to improved birth outcomes. Since most smokers begin smoking prior to age 21, smoking prevention in school children would significantly reduce the prevalence of smoking.

One Michigan project is taking place in Genesee County where there is a large minority population and a high infant mortality rate. This 18 month Genesee County Health Department program provides a smoking cessation clinic to women in the Special Supplemental Feeding Program for Women Infants and Children and to smoking prevention activities targeted at school children aged 11 to 18. These efforts are being coordinated through CONNEXION, Inc., a prevention agency working to support healthful behaviors. This agency will involve other community groups like the Scouts, Big Brothers and Big Sisters and church groups. Genesee plans to produce a final report on the implementation of their project by February, 1989. District Health Department #5 is organizing smoking prevention efforts in its service area. One of the target populations is the Black community in Lake County.

Conclusion

The detrimental health consequences of smoking have been well documented. Public health officials view smoking as the number one **preventable** cause of mortality and morbidity in the United States. Significant progress has been achieved in reducing the prevalence of smoking in the general population. In the last few years, moreover, societal norms have begun to shift decisively against smoking. In view of the high prevalence of smoking in minority communities and the focus of tobacco industry advertising on these communities, health leaders must pay special attention to encouraging smoking prevention and cessation activities among minorities. The goal of a smoke free society is only possible if minorities are included in the anti-smoking effort.

In view of the high prevalence of smoking in minority communities and the focus of tobacco industry advertising on these communities, health leaders must pay special attention to encouraging smoking prevention and cessation activities among minorities.

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Chapter Seventeen

HYPERTENSION PREVENTION AND CONTROL

Hypertension, or high blood pressure is one of the most deadly of the treatable diseases. Uncontrolled hypertension can lead to stroke, heart attacks, kidney disease and kidney failure, and accelerates diabetes complications. As discussed in Chapter Two (Cardiovascular and Cerebrovascular Disease), hypertension is an extremely important problem for minorities.

Hypertensives today are more likely to be diagnosed and to be on medication than were hypertensives in 1960.[1] These improvements have important implications for cardiovascular mortality. Nationally, these improvements have occurred for all race/sex groups. According to the 1980/83 Michigan High Blood Pressure Survey,[2] however, in the 1980's in this state the proportion of Black female hypertensives under control declined from 44 percent controlled in 1980 to 28 percent in 1983-84 (see Table 2-2). For non-Blacks, however, the percent of hypertensives under control increased slightly from 1980 to 1983-84 (males: 15 percent vs. 18 percent; females 33 percent vs. 36 percent).[3]

As noted in Chapter Two, studies show that hypertension is becoming more prevalent among non-Black minority groups as they adopt a Western life style. Factors such as eating habits, levels of exercise and stress may be resulting in increased hypertension for American Indians, Hispanics and Asians. It is essential that we attempt to prevent hypertension and to control its negative health effects. Furthermore, we should insure that minorities, as well as Whites, receive the benefits of modern medical improvements.

Prevention and Treatment

Prevention

Studies show that improvements in hypertension rates can be made through dietary changes such as a decrease in sodium intake, and maintaining one's recommended weight. Diet-related health risks are especially important for minorities. For example, Black, Hispanic and American Indian women are more likely to be overweight than non-minority women. Furthermore, Blacks have been shown to both consume more salt[4] and to be more sensitive to the hypertension-inducing properties of salt than the population as a whole.[5] Programs that are directed toward helping minorities to adopt more healthful eating habits are needed.

There is some evidence that blood pressure levels can be decreased through stress reduction and related changes in lifestyle. For example, muscle relaxation[6] and stress perception[7] techniques and exercise programs[8] have been devised to help individuals cope with stress and have been shown to decrease blood pressure.

The negative effects of stress can be especially important for minorities, particularly those living in inner-city areas.[9] Based on such findings, many have recommended ways to reduce the stress in the lives of minority persons. The stressors that minorities face, however, are major and systemic such as prejudice, poverty and joblessness. Therefore, while attempts to reduce stress may be worthwhile, their impact will be long-term rather than immediate.

Treatment

Follow-up, patient education and good patient-physician communications are often as necessary for treatment as are initial screening and referral.

Physicians routinely measure their patient's blood pressure. Therefore, individuals who use the established medical system most likely have received frequent checks for hypertension as well as recommendations for necessary treatment. It should be noted, however, that there are barriers that prevent patients, both minority and non-minority, from following or understanding a physician's advice. For example, many hypertensives experience negative side-effects from their medication such as stomach irritation, dry mouth, weakness, and drowsiness. Since hypertension frequently has no symptoms, patients may actually feel better when they stop taking their medication. Consequently, follow-up, patient education and good patient-physician communications are often as necessary for treatment as are initial screening and referral.

In Black folk medicine individuals are sometimes said to suffer from "high blood," which is often treated with sour or bitter foods such as pickle juice or epsom salts that are believed to "thin the blood." Unfortunately, this condition is often confused with high blood pressure. Consequently, some hypertensive Blacks, who as a

population tend to be salt-sensitive, are consuming salty foods in order to treat their high blood pressure.[10]

Physicians should attempt to understand these barriers and spend some time educating the patient in a culturally sensitive manner about how to care for high blood pressure. These practices should become a standard for care and treatment of high blood pressure.

Community Programs

Many individuals, particularly minority members who typically are poor, cannot obtain regular medical examinations. Consequently, programs have been established that screen such individuals for hypertension, and help them to receive treatment. The Michigan Department of Public Health provides hypertension screening, education, referral and follow-up through local health departments, hospitals and Urban Leagues. These program services focus on those who are at high risk for hypertension and for having untreated hypertension. Specifically, the target groups are Blacks, males, individuals at or below 185 percent of the poverty level and other medically undeserved persons. Currently, this program is available in 21 counties in the state and is concentrated in districts that have large low-income and minority populations. Follow-up records are maintained on each client's status so that the health care worker can provide continued services as needed.

Some community groups such as churches offer hypertension screening and counseling to their members.

Some community groups such as churches offer hypertension screening and counseling to their members. For example, the Detroit Public Health Department funded a local project to train lay church members to measure blood pressure. This program provides convenient and free access to health services. These members screen the congregation for hypertension, refer them to physicians for treatment when necessary, and follow-up on the members' progress to assure that they are adhering to their prescribed treatment. Such a follow-up effort on the part of community members is extremely helpful since they can monitor the hypertensive's treatment more often than can a physician. Furthermore, the hypertensives have frequent contact with the trained church members and thereby receive advice and social support from trusted peers.

Conclusion

The substantial progress made in the control and treatment of blood pressure in the 1960's and 1970's appears to have eroded in the 1980's among the Black population in Michigan. Increased efforts by public health, medical, and community organizations are needed to renew progress in this area, which is so vital to the cardiovascular health of the population.

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Chapter Eighteen

DIABETES EDUCATION

Diabetes, the sixth leading cause of death in Michigan, can result in many serious complications. For example, people who have diabetes are twice as likely to be hospitalized as the non-diabetic population and have twice as many heart attacks and strokes as those who do not have the disease. Fifty percent of all non-traumatic amputations in the United States are performed on diabetics and 25 percent of all cases of kidney failure are caused by diabetes. Diabetes is the leading cause of new blindness in the United States. Furthermore, maternal diabetes increases the risk of life-threatening problems for newborns.

There is no known cure for diabetes. However, with close management of diabetes through prompt, adequate treatment and good self-management practices, certain of these major complications may be reduced and perhaps avoided altogether. Numerous studies, demonstration projects and public resources have established the efficacy of diabetes patient education as a therapeutic intervention. Patient education as an isolated event, however, is not effective. It must be an integral component of continual optimal care to be efficacious.[1] Persons at risk, by either having diabetes or bearing a high potential for its development, need not only to be educated about their particular risk factors and encouraged to practice good self-management principles, but also supplied with sufficient resources to assist them in that self-management.

Interventions can occur in either the prevention of diabetes (primary intervention) or in the prevention of complications associated with diabetes (secondary intervention). For example, it has been estimated that the occurrence of non-insulin dependent diabetes could be reduced as much as 50 percent with effective interventions to reduce obesity, and that strokes in the diabetic population could

In 1979, the Indian Health Service (IHS) established five model care programs to provide effective diabetes care in culturally acceptable and accessible ways.

be reduced by 85 percent with the effective interventions for control of high blood pressure.[2]

In the 1960's, several studies of diabetic programs serving Hispanics in Los Angeles and Blacks in Memphis and Atlanta showed that continuing access to quality care could improve outcomes, decrease hospitalizations, and save money. These studies stimulated a growing national movement to expand the availability of comprehensive outpatient diabetes education. In 1979, the Indian Health Service (IHS) established five model care programs to provide effective diabetes care in culturally acceptable and accessible ways. Two additional programs were established in 1985. Using a team approach, the centers developed standards of care, educational approaches, and materials specific to particular Indian tribes. The advances achieved by these centers are being introduced to other IHS facilities.[3]

There has been a significant expansion in the availability of diabetes education resources in Michigan in recent years. The number of agencies providing such services has increased and third party payers, specifically Medicare (to hospitals only) and Medicaid (to hospitals, health departments and public-funded agencies), have begun to reimburse for outpatient diabetes education. There are also indications that the quality of diabetes patient education is improving, as more agencies adopt the Diabetes Patient Education Program Standards developed by the Michigan Department of Public Health, Diabetes Control Program (MDPH-DCP).

The Diabetes Patient Education Program Standards contain essential elements for addressing problems experienced by minorities in accessing adequate health care to assist them in managing their diabetes. These elements include: 1) the requirements for group as well as one to one instruction; 2) assistance for those individuals who may not, for some reason, be eligible for the agency's program; 3) dissemination of information about the program's benefits, availability and costs throughout the agency's service area; 4) involvement of a person from any special population group (for example migrant farmworkers or Asian-Americans) in the planning process of the program; 5) promotion of self-care management of diabetes; 6) individualized assessment of learning needs based in part on language spoken and read, race or cultural group, educational level and literacy, ability to finance diabetes care and presence of any risk factors associated with diabetes complications; 7) incorporation of learning materials adapted as necessary to meet the needs of any special population groups to be served by the program; and 8) identification of resources available to assist individuals with special needs.

It is anticipated that new projects such as the Upper Peninsula Diabetes Outreach Network will have a significant positive effect on minority health problems. The Keweenaw Bay Indian Com-

munity, Sault Tribe of Chippewa Indians and Kincheloe Indian Health Center are active participants in the network. This project includes identification of patients at high risk for complications of diabetes and referral to an agency capable of providing the care and support needed. Referrals are based on criteria which incorporate educational deficits regarding self-care techniques and the major risk factors associated with diabetes including uncontrolled hypertension, inadequate skin and foot care, lack of regular ophthalmologic exams, obesity and pregnancy.

In an effort to prevent unnecessary diabetes-related amputations in Michigan, a model regional foot care center is under development at Blodgett Hospital in Grand Rapids and the University of Michigan Hospital is nearing the completion of a foot care manual for primary health care providers outlining assessment and care techniques of the diabetic foot. Statewide dissemination of the professional care information is being planned along with patient self-care information geared toward raising patient awareness of the benefits associated with good foot and skin care.

Approximately 12,000 copies of professional guidelines on diabetic retinopathy, which were developed in 1984 by a state-level Task Force on Diabetic Retinopathy, have been disseminated throughout the state.

Approximately 12,000 copies of professional guidelines on diabetic retinopathy, which were developed in 1984 by a state-level Task Force on Diabetic Retinopathy, have been disseminated throughout the state. With the help of the Michigan Organization of Diabetes Educators, the American Diabetes Association-Michigan Affiliate, the Office of Services to the Aging, and the Michigan Ophthalmological Society, over 50,000 patient education brochures about diabetic eye disease have also been distributed throughout Michigan. As a supplement to the statewide effort, the Michigan Health and Social Security Research Institute and Wayne State University's Kresge Eye Institute have participated with the MDPH-DCP in a project to assess the degree to which increasing the availability of vision services results in improvements in vision status, overall health care, and health service utilization patterns. The population served by this project is comprised of members of the UAW families in the Chrysler bargaining unit; nearly half those involved in the project are Black. Under this project, diabetic patients who have not been to an ophthalmologist within the past year are offered free ophthalmological examinations. Early detection of diabetic eye disease followed by prompt treatment may save the patient's sight.

The Wayne State University Model Preconception and Prenatal Care Clinic for Women With Diabetes and the University of Michigan Women's Hospital Diabetes and Pregnancy Clinic are part of an initiative to develop a statewide program that will reduce significantly the likelihood of adverse maternal and fetal outcomes among women with diabetes and also among those who develop glucose intolerance during pregnancy. Key education components of these model program are awareness of need for good self-management of diabetes prior to conception in the known diabetic woman and development of good self-management skills, including close monitoring, during pregnancy. In addition to the clinics,

The need to continue expansion of educational and service programs to minority groups remains.

pre-gestational and gestational guidelines are being developed and reviewed for statewide dissemination to health care providers.

Through several grants the MDPH-DCP has aided the development of diabetes education materials for minorities. Examples include Spanish-oriented materials developed with Henry Ford Hospital and St.Mary's Hospital of Saginaw, Native American materials developed through the Detroit American Indian Health Center and professional education for providers of health care for Native Americans with the Kincheloe Indian Health Center in the Upper Peninsula.

The need to continue expansion of educational and service programs to minority groups remains. The scarcity of culturally relevant educational materials, as well as culturally sensitive patient instructors and health care providers still needs to be examined and remedied. Although clinics and health care networks are being established, the availability of patient education programs needs to be expanded, perhaps as a basic health service provided by all health care agencies.

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Chapter Nineteen

REDUCING THE RISK OF VIOLENCE AND INJURY

Background

Intentional injuries include homicides, suicides, assaults, spouse abuse, and child abuse. Unintentional injuries include motor vehicle accidents, accidental falls, accidents caused by fire and flame, accidental drownings, accidental poisonings, accidents caused by firearms, among others. The burden of mortality and morbidity resulting from injury make this one of the nation's most significant health problems. Minorities are disproportionately affected by injuries, particularly by intentional injuries.

Prevention of injury has been gaining increasing attention in recent years. Three general strategies have been identified in the literature on injury prevention: persuading individuals to alter their behavior; requiring individuals to alter their behavior by laws or administrative rule; and providing automatic behavior by product or environmental design.[1] Research on prevention methods for the control of unintentional injuries indicates that the provision of automatic protection such as household electrical fuses is most effective, changing laws to require specific behavior changes is second in effectiveness, and that the educational strategy is least effective. Regulations requiring improvements in the design of vehicles and other environmental changes have contributed to a generally declining trend in the unintentional injury death rate since the early

1940s. Michigan's recent mandatory seat belt legislation has also led to behavior change and to reduced morbidity and mortality.

Prevention of Intentional Injury

Research on prevention of homicide and suicide is just beginning. Among the factors which have been cited as contributing to intentional injuries are: the prevalence of firearms; alcohol and drug abuse; poverty and joblessness; and the portrayal of violence in the media, particularly television.[2] Affecting any of these factors would involve significant changes in policies similar to those which have taken place in the automobile safety in the past three decades.

In recent years, a number of public health leaders have advanced the concept that homicide is a public health problem.

In recent years, a number of public health leaders have advanced the concept that homicide is a public health problem.[3] In the past, homicide was viewed essentially as a problem for the criminal justice system. Simple apprehension and punishment of offenders appears to do little to prevent homicide. By defining homicide as a public health problem, public health leaders hope to gain the public's support for activities and policies designed to prevent homicide. A public health approach means recognizing the problem as one with environmental roots, it means looking at the suffering of homicide victims as not solely a problem for those individuals and their families but a health and social problem for the society as a whole.

In a discussion of changes needed to reduce black violence, James Comer advocates the promotion of greater understanding of the factors responsible for violence. He argues that scholars, political leaders and mass media executives must promote an understanding of the "critical role of family and its dependence on economic opportunities and positive relationships to institutional leadership." Programs designed to assist black community economic and educational development will only be sustained if there is understanding in the larger society of the negative impact of past government and private sector policies on the black community.[4]

Given his understanding of the critical importance of child rearing, Comer favors a national family program. All families need to "feel reasonably supported and appreciated" in their child rearing efforts. The fragmented and uneven quality of today's family support programs results in many families falling "through the cracks."

Actions to restore a "sense of community" are needed. The neighborhood watches are an example of the concern that is needed, in Comer's view, but they are defensive and negative in orientation. A

positive and supportive community climate is needed. An example of such an approach is the Ohio Department of Health's recent initiation of a Parenting for Peaceful Families program. The program involves a community-based discussion series that offers parents practical information about parenting skills, child development and parental justice.[5]

The Ohio project is based on the concept that violence is a learned response and that peacemaking can be a learned response as well. A similar approach guides a summer program developed by Wayne State University's Center for Peace and Conflict Studies. The purpose of the Center program is to develop skills in non-violent conflict resolution in the school environment.[6]

A violence prevention curriculum which has received a great deal of attention is the Boston Youth Program. The program is a health education service for tenth graders. The prevention curriculum is designed to raise the individual threshold for violence and to develop creative alternatives to fighting. Role playing a fight is a part of the curriculum. Other programs for youth emphasize the importance of building self-esteem as a means of reducing the tendency to violent behavior.[7]

The Children's Trust Fund, which is supported by taxpayer contributions via a checkoff on the state income tax return, supports a number of projects designed to prevent domestic violence. Among the goals of current projects are the development of parenting skills, assisting parents of newborns, and to increase awareness of and prevent child sexual abuse.[8]

Improved medical protocols are needed to identify victims of domestic violence. Many of these persons are not identified as battering victims because they do not volunteer this information and are not questioned about possible battering. According to the *Report of the Secretary's Task Force on Black and Minority Health*, a model emergency room protocol has been developed for hospitals in the State of New York and can be adapted for use elsewhere.

Improved medical protocols are needed to identify victims of domestic violence.

In addition to specific programs such as school-based curricula and family support programs, policy issues must be addressed in developing solutions to the problem of violence. Methods of reducing gun-related injuries, and particularly keeping guns out of the reach of children, need to be developed. One approach might be to require firearms to be designed with safety catches and trigger tension sufficient to keep small children from firing guns when they find them. The Michigan Department of Public Health could also work with communities interested in developing campaigns designed to reduce the risk of gun-related injuries and deaths. Activities might include the development of community-based organizations to combat violence, educational efforts emphasizing the importance of keeping guns out of the reach of children and teenagers, the incorporation of conflict resolution curriculum

A number of initiatives involving interventions at early stages of the life cycle might be considered as features of a coordinated and broad-based campaign against homicide.

modules in schools, and the preparation of a model local gun control ordinance.[9]

A number of initiatives involving interventions at early stages of the life cycle might be considered as features of a coordinated and broad-based campaign against homicide:

1. Expand pre-school classes to reach minority three and four year olds throughout Michigan. Screening and referral for health problems should be included as a feature of these expanded pre-school programs.

2. Encourage schools to include programs that build children's self-esteem, independence, and hopefulness about their future.

3. Expand the summer jobs for youth program to reach all unemployed youth in the state.

4. Develop a community based program that deals with the violence that develops between rival youth gangs. One such program has worked to prevent a resurgence of gang violence through communication with concerned parties and organizational efforts to combat the environmental and social conditions that foster gang violence.

These and other initiatives can be features of a health promotion campaign that emphasizes that homicide is a public health issue about which something can and should be done.

Prevention of Unintentional Injury

There is research evidence that drunk driving accidents are reduced by increasing the legal age for the purchase and consumption of alcoholic beverages. There are indications that alcohol consumption is affected by price; increasing taxes on such products is a possible area for intervention. Changing the social environment so that it discourages rather than encourages heavy drinking is another intervention strategy. Organizations such as Mothers Against Drunk Driving (MADD) have helped to heighten awareness of the inappropriateness of combining drinking and driving. Efforts by MADD and other organizations have begun to change social norms regarding alcohol use. Counter-advertising in response to alcohol beverage advertisements is another tool that might be employed to change social norms regarding drinking. Programs which promote independent decision-making and social skills to respond to peer pressure appear to have an impact on alcohol use.[10]

To prevent deaths and morbidity due to fires and burns, the installation of smoke detectors and fire extinguishers has proven effective. Federal or state requirements for self-extinguishing cigarettes have been proposed as helpful. Programs to lower the water temperature on heaters are also being proposed.[11] To prevent fires from causes such as faulty wiring, appropriate regulation by state and local authorities is required. Prevention of injuries from illegal pesticides also involves regulation.

Conclusion

The causes of violence and injury in our society are multi-faceted. Minorities are especially victimized by violence but the problem is not one of minorities alone. The public health community must join with other human service groups to devise multi-dimensional solutions to this public health issue.

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Chapter Twenty

REDUCING LOW BIRTH WEIGHT AND INFANT MORTALITY

Prenatal Postpartum Care Program

Michigan has taken a number of steps in the last several years to address the state's high infant mortality rate. In 1985 legislation was enacted establishing prenatal care as a basic health service. Under this legislation, the Michigan Department of Public Health, through the intermediaries of local health departments and hospitals, reimburses the cost of prenatal care for those not covered by Medicaid, provided their incomes are at or below 185% of the poverty level and they are otherwise uninsured at the time of enrollment. The intermediaries will also provide referrals to women who do not meet the eligibility criteria. This statewide program, known as Prenatal Postpartum Care (PPC), includes outreach, prenatal care, laboratory tests, vitamin and mineral supplements and education. Payment for labor and delivery care has been added as of Fiscal Year 1987-88.[1]

Approximately 9,600 women were eligible for PPC in Fiscal Year 1985-86 and 6,000 women were actually served. The eligibility criteria consider uninsured women under 19 years of age an economic unit independent of their parents' income, even if living at home. Seventeen and one half percent of PPC participants were below age 19 in Fiscal Year 1984-85. There is no accurate way to iden-

tify the proportion of PPC participants who are minorities because the data system is not fully operational.

Maternal and Infant Care Program

The Maternal and Infant Care (MIC) is a program designed to target urban areas having high infant mortality rates. In Michigan, the MIC program began in Detroit in 1972. MIC now covers Wayne, Ingham, Muskegon, Kent, Berrien and Saginaw counties as well. The program is funded by a Maternal and Child Health block grant from the Department of Health and Human Services and by State appropriations.

Eligibility for the MIC program is based on low income (185% of poverty) and high medical, psychosocial or nutritional risk. Factors considered are: age under 17 or over 35 years; parity (5 or more births); inter-pregnancy time span of 15 months or less; weight 20 percent or more over ideal body weight or 15 percent below ideal body weight prior to pregnancy; substance abuse; pre-existing chronic disease; maternal disease; poor obstetrical history; fetal-maternal risks; and unavailablity of other health care. There is flexibility in the financial portion of the eligibility criteria to ensure that help is given to low income women at nutritional risk who would otherwise receive no care. In Fiscal Year 1984-85, 3,200 women were served by the MIC programs in the Detroit and Wayne County area, and 1,850 in the remaining counties.

Infant Health Initiative Program

The Infant Health Initiative Program (IHIP) was started in 1982 to extend MIC type services to rural areas in Michigan. Several non-MIC county health departments with higher than average infant mortality rates have received grants to provide ancillary services such as public health nursing, social work, and nutritional services to low income pregnant women and infants at risk. Eligibility criteria are the same as for MIC. About 1200 women are served each year, of whom 18 percent are Black.

Women, Infants and Children Program

The special supplementary food program for Women, Infants and Children (WIC) was established at the federal level in 1972. WIC is designed to reach at risk pregnant, postpartum and breastfeeding women, infants, and children up the age of five years. The WIC program provides food benefits prescribed according to the nutritional needs of the participant. WIC also provides nutritional counseling and education. About 24,000 women are served monthly by the program. A siginificant proportion of those served are minorities.

Task Force on Infant Mortality

In 1986, a Task Force on Infant Mortality was convened to review the problem of Michigan's high infant mortality and recommend actions to improve the situation.[2] The task force formulated a comprehensive five year plan designed to achieve significant results by focusing on the highest risk groups in counties where the infant mortality rate is the highest. These 13 counties account for seventy-six percent of all infant deaths and 98 percent of Black infant deaths.

The first objective of the five-year plan is to improve prenatal care, especially for the high risk groups.

The first objective of the five-year plan is to improve prenatal care, especially for the high risk groups. One goal is to recruit pregnant women for prenatal care; this can be done by using paraprofessionals to work in communities where the risk is greatest; they help pregnant women keep appointments and comply with their health care providers advice. There is a need to improve and expand public information in order to motivate pregnant women to seek prenatal care. The task force envisioned the creation of programs to reach out to low income minority women. Features of such programs are expanded transportation, extended service hours to meet client needs, babysitting services for mothers with other children, translators and case management. Another task force recommendation for improving prenatal care was the expansion of the state's public health prenatal care delivery system. It suggested incentives for providers to serve low income families. The task force also proposed that nutrition services be provided to pregnant women.

A second objective of the five-year plan is to decrease the number of unintended pregnancies. The task force recommended that state and federal funding for family planning services be expanded and that ways to reach high risk teenagers should be explored.

A third objective of the task force plan is to increase the number of high risk newborns who receive adequate, comprehensive neonatal and post-neonatal care. The task force recommended that all high risk infants would receive comprehensive care. This care system would include high risk medical services, psychosocial services, nursing services, and nutrition services and would be extended to both Medicaid and PPC infants.

Objective four of the plan is to improve the State's ability to understand the infant mortality problem through improving existing data systems and conducting special studies. The task force recommended that birth and death certificates be revised. Birth certificates would contain more information concerning social and economic factors, including improved identification of race and ethnicity, substance abuse, and nutritional status. The task force thought it was important to study minority attitudes concerning reproductive health practices, especially why some women do or do not seek prenatal care; the use of walk-in centers for prenatal care and the use of unlicensed pregnancy services (for example, lay midwives) was also of interest to the task force. The task force suggested that research be conducted on the effectiveness of specific components of prenatal and postnatal care. There is also a need to evaluate certain well-defined combinations of specific prenatal services designed to meet the variety of needs of high risk women. The task force recommended that the Department survey specific geographic areas (such as census tracts) to assess the availability and willingness of providers to accept Medicaid and PPC patients.

Infant health care would be established as a basic health service provided by the Department by the year 1990.

In addition to the recommendations which constitute the five-year plan, there are other measures which the task force recommended in order to reduce the infant mortality rate over time. A particular area of concern is improving infant care. It is recommended that there be an extended "delivery package" which would encompass the prenatal period and continue beyond the hospital discharge of the parent and high risk infant. Home visits would be made by health care professionals based on need. Psychosocial risks would be evaluated by a member of the Department of Mental Health. Funding would be expanded in order to provide more comprehensive social services. Infant health care would be established as a basic health service provided by the Department by the year 1990. Funds would also be appropriated to help low income women provide nutritious meals to their children.

Recommendations for improving the coordination of human services and for strengthening the regional perinatal care system have also been presented. Referral agreements among local agencies offering services to pregnant women would be coordinated so that these high risk women would be provided with the most comprehensive services available in their com-

munities. The Department would develop a program of regionalization that defines the responsibilities of regional centers, referring hospitals, and public health departments for providing referrals, education, and follow-up.

Fiscal Year 1987-88 Program Initiatives

Governor Blanchard's Fiscal Year 1987-88 budget requested, and the Legislature appropriated, $17 million in new funding to begin implementing the task force plan. Twelve million dollars of the $17 million has been directed to the Department of Social Services Medicaid Program to:

1. Implement the new Maternal Support Services Program which will assist impoverished pregnant women with non-medical needs and stresses during their pregnancy.

2. Allow women at the poverty level to become eligible for Medicaid rather than the current requirement that income be 65 percent of the poverty level.

3. Increase the reimbursement rate which physicians receive from Medicaid for prenatal services.

Five million dollars came to the Department of Public Health to:

1. Expand the Prenatal/Postpartum Care (PPC) Program which pays for prenatal care of women who are living in poverty and do not qualify for Medicaid to pay for labor and delivery.

2. Increase the number of pregnant women participating in the WIC Supplemental foods program.

3. Increase activities directed at reducing the incidence of teen pregnancy.

4. Increase outreach to pregnant women.

5. Increase special advocacy efforts for minority communities.

These are important steps toward the implementation of the five year plan recommended by the Task Force on Infant Mortality. Such activities as outreach, improved prenatal and infant care, and the establishment of comprehensive support services will deal with the immediate needs of many women at high risk. Putting in place the other elements of the five year plan will require continued commitment and expanded fund-

ing. The task force recommended that program evaluation be an integral feature of plan implementation.

Getting to the roots of the infant mortality problem also requires complementary efforts in the areas of education and jobs. Young people need the kind of environment that will encourage their self-confidence by giving them expanded possibilities in education and employment. Closing the racial gap in education and employment would also have a significant and long term impact on the health status of young people, mothers, and infants.

Notes

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Chapter Twenty-One

REDUCING ENVIRONMENTAL HAZARDS

Background

Interventions to reduce the impact of environmental hazards on minority health status involve changes in federal, state and local policies. Housing is an area of great concern because of its impact on the health of the population and also because there is generally an absence of state public health policy on housing. Other important environmental hazards include pesticides, field sanitation, and occupational hazards. Environmental problems affect all members of society but minority groups appear to be disproportionately affected by many of these hazards. Planning for long term solutions to these problems needs to be developed.

Housing

The goal of a state public health housing policy should be a decent and suitable place to live for every Michigan family. Jurisdiction for unsafe housing originally was provided under Act 167, Public Acts of 1917, for housing of three units or more in cities with a population of 100,000 and over. Very few sections of Act 167 are currently implemented since nearly all of them have been replaced by city and county ordinances. The Public Health Code enacted in 1978 included a provision for

The state health plan establishes the goal that all Michigan residents should have housing which meets minimum standards.

the establishment of statewide public health housing standards. Efforts to establish such standards were abortive, however, and the section of the Code on Housing (Part 122) was repealed in January 1981.

The state health plan establishes the goal that all Michigan residents should have housing which meets minimum standards for structural adequacy, is not overcrowded, does not present hazards related to lead base paint poisoning, and is not infested with rodents. The plan also set the objective for a reduction of unhealthful housing in Michigan. A comprehensive approach to housing includes long range planning, setting minimum standards, financing of needed rehabilitation, demolition of unsafe housing, relocation of displaced families, and coordinating between the agencies that deal with housing and the occupants.[1]

From a public health point of view, strengthening the Department's efforts at improving the quality of housing should involve: 1) a community analysis to identify and assess current housing conditions; 2) adoption of minimum health (livability) standards in housing; and 3) a program to achieve and maintain these standards.

The purpose of establishing housing (livability) standards is to protect, preserve, and promote the well-being of people, to prevent and control the incidence of communicable and chronic diseases, to reduce exposure from toxic substances and environmental health hazards (lead poisoning, radon exposure, etc.) and to maintain adequate sanitation to protect the public health. Standards should cover: minimum basic equipment, such as lead free plumbing; facilities for light, ventilation, and thermal conditions; safety from fire and accidents; the location and amount of space for human occupancy; adequate levels of maintenance, requirements which will prevent rats from entering structures or gaining access to food, water, or harborage. Standards should also determine the responsibilities of owners, operators and occupants of dwellings; they should apply to all dwellings public and private, including those now in existence and those to be built in the future. Provision must be made for the administration and enforcement of these standards. In some jurisdictions that have local housing codes, enforcement is virtually non-existent because of inadequate funding or poorly worded codes.[2]

The enforcement of housing standards in Michigan will be enhanced by the Department of Social Services vendor/shelter payment policy initiated in December 1987. In order to qualify for direct payment of the welfare shelter allowance, landowners must submit their names to the local unit of government responsible for housing inspections and code enforcement. Payments will not be made to the landowner for any housing unit which does not meet the appropriate codes or if the landowner has not cooperated in completing repairs. The Depart-

ment of Social Services hopes that this policy will provide an incentive for landowners to upgrade substandard properties.

Pesticides and Agricultural Field Sanitation Standards

An important issue for minority health is extending to agricultural workers the same "right-to-know" about health hazards of the toxic substances with which they work that workers in other industries now have. Another related proposal is to establish a system of data collection on occurrences of pesticide poisonings.

Also of importance to the protection of the health of migrant workers is the establishment of a state agricultural field sanitation standard under the Michigan Occupational Safety and Health Act, a standard which includes provision of toilet facilities, and drinking and washing water. Such a proposed standard has been developed by the Michigan Department of Public Health Occupational Health Standards Commission. If promulgated, it would require that agricultural employers provide all field employees with adequate, potable, cool drinking water, adequate sanitary toilets and adequate hand-washing facilities.

Of importance to the protection of the health of migrant workers is the establishment of a state agricultural field sanitation standard under the Michigan Occupational Safety and Health Act.

Other Environmental Concerns

Department efforts in the areas of rodent control, lead hazard abatement, and control of exposure to illegal toxic chemical such as "roach milk" need to be expanded. Stepped up protection of the food supply in minority communities also needs to be addressed.

Conclusion

Although development of minimum housing standards appears to be one of the most immediate public health policy needs, action to significantly improve the quality of the urban environment for minorities will require other major program initiatives. Making available sufficient quantities of decent housing for the homeless and for others living in substandard, dilapidated housing would involve significant new

Another important issue for minorities, particularly Hispanics, is the "right-to-know" about the health hazards of agricultural chemicals.

governmental expenditures. Rebuilding of the infrastructure of major urban centers where most minorities live would improve the quality of the urban environment and at the same time contribute to solving the underlying economic crisis facing minority communities. Another important issue for minorities, particularly Hispanics, is the "right-to-know" about the health hazards of agricultural chemicals and the establishment of field sanitation standards. More generally, the public, particularly in minority communities, needs to be better informed about environmental health hazards and the responsibilities of state government for protecting consumers.

Notes

1. Michigan Department of Public Health, Bureau of Environmental and Occupational Health, Housing Update and Recommendations.
2. Michigan Department of Public Health, Bureau of Environmental and Occupational Health, Housing Update and Recommendations.

Chapter Twenty-Two

IMPROVED NUTRITION AND ACCESS TO FOOD

Public Education

Nutrition is important to health and it is important that minorities receive current information on nutrition so as not to lag behind the majority culture. The American Heart Association, the U.S. Department of Health and Human Services, the U.S. Department of Agriculture, the American Cancer Society, the National Cholesterol Education Project, and the American Dietetic Association are attempting to educate the public, including minorities, through various media. For example, Health and Human Services has published the pamphlet "What Black Americans Should Know About Cancer." This pamphlet provides current, straight-forward information on nutrition including up-to-date topics like fiber consumption, and sodium and fat reduction.

The Michigan Department of Public health publishes nutritional guides that are aimed at minorities and people with lower incomes. *Check out Nutrition: Buy Better* discusses the nutritional value of foods and presents cost per serving information. Also, several suggestions are given for making nutritious but inexpensive food purchases. Other nutrition guides produced by MDPH are: *Ironing Out Your Diet, Breastfeeding: A Special Gift, Food and Nutrition Facts for Pregnancy, Infant Feeding Guide for Bottlefed Babies,* and *Infant Feeding Guide for Breastfed Babies*. Each of these guides is written in Spanish as well as English.

Nutrition Education Programs for the Poor and Minorities

The Expanded Food and Nutrition Education Program is a state-level educational program which provides food to low-income families with children. The program teaches basic nutrition concepts, food buying skills, proper food storage techniques and budgeting. Currently, this program is available in ten Michigan counties—Berrien, Genesee, Ingham, Kalamazoo, Kent, Macomb, Muskegon, Oakland, Saginaw, and Wayne.

The federally funded Head Start Program includes nutrition services; it provides dietary information to the parents of four year old children assessed to be at nutritional risk. The Head Start Program in out-Wayne county has one full-time and four part-time nutritionists who provide counseling to parents of these children. This program screens approximately 2,200 children per year and in 1986 provided education to approximately 15 percent of these children. In 1986-87, 43 percent of the children served were minorities and 9 percent of these were Middle Easterners.[1]

The Special Supplemental Feeding Program for Women Infants and Children provides nutritional counseling for at-risk women and young children. This program is available statewide. In the Detroit Department of Health, all of the approximately twenty-five thousand individuals who enter the program yearly receive some form of nutritional counseling. Approximately 81 percent of these are Black, 13 percent White, 3 percent Hispanic and less than one percent American Indian or Asian. Group counseling was provided to most of the recipients last year. Additionally, 3,596 people who were assessed to be at a higher risk, such as individuals who are overweight or who are anemic, received individualized counseling.[2]

The Title III congregate feeding programs, which are funded by the Older Americans Act, provide nutritional and health education to individuals 60 and older; services are delivered by 14 area agencies throughout the state. Title III programs also provide home delivered meals to those seniors who are home bound. Throughout the State, 14 percent of the congregate meals and 14 percent of the home delivered meals are provided to minority elderly.[3]

The Northwest Senior Resources, Inc., which covers a ten county area in north west Michigan, provides presentations on nutrition and other health topics once per month at each of the fifty site areas where noon meals are served. These presentations reach a total of approximately four thousand seniors. Three of the site areas are managed by Native Americans and serve this population exclusively. For the home-bound seniors, nutritional-needs assessments and

physician contacts are made by home nurses. Nutritionists provide home counseling to those at high risk.[4]

As discussed in Chapter 13, these programs have limited federal funding and cannot serve all of those in need. The need for home-delivered meals is especially great since many of the elderly cannot travel to congregate sites. In many areas, people are on waiting lists for home-delivered meals. Nevertheless, there are fewer funds available for this service than for congregate meals.

ERASE, a for-profit concern that is located in Detroit, provides weight loss counseling to Blacks and was developed by Blacks. The program is modeled after "Weight Watchers" but it emphasizes inclusion of food choices that are traditional in the Black community. Furthermore, the company produces and sells traditional Black foods that are prepared in such a way to be within the dietary guidelines of the program. The managers of the program believe that the program is successful, citing not only the special foods but also the necessary social support the clients can obtain from the other Blacks in the program.

Ideas for Improvements

Changing one's dietary habits is a complicated process; specific recommendations are not conveyed as easily as, for example, the fact that one should stop using drugs or smoking cigarettes. For this reason, personal counseling, in addition to public education, may be necessary. Furthermore, improved dietary habits require behavioral changes as well as changes in attitudes and beliefs about food. Nutrition counselors are necessary in providing appropriate feedback and support to assist the individual in changing eating habits.

Changing one's dietary habits is a complicated process, and for this reason, personal counseling, in addition to public education, may be necessary.

Public communications aimed at the majority population may be less effective with minority and poor individuals. First, minority members may have less exposure to the messages of public education. Second, since dietary information cannot be easily simplified, messages are frequently long. Nutrition education programs with individual or group counseling should be available to more individuals throughout the state and materials presented in a way that is interesting and sensitive to minority food practices and traditions.

In conjunction with nutrition education, feeding programs should provide meals that are healthful and consistent with current dietary guidelines. Many foods that are plentiful in these programs such as cheese and butter are high in sodium, fat and calories. The *Michigan Food Policy Report* of the Michigan Department of Agriculture recommends content specification levels and more variety for the food items provided in emergency food programs.[5] This could assist in making food choices available which could be tailored to minority group preferences.

Minorities are disproportionately poor and have been particularly burdened by the increase in hunger.

The question of the provision of an adequate quantity of food appears simple but new public policy initiatives must be taken to address the disturbing increase in hunger in the 1980's. Minorities are disproportionately poor and have been particularly burdened by the increase in hunger. Federal food programs are reaching many people in need but not everyone in need is being served. The growth of emergency feeding programs is an indication that the level of aid being given is inadequate. The increase in the use of food banks in the days prior to the distribution of the monthly food stamp allotment is but one indication of the need to raise the minimum benefit standard. A commitment to "end hunger" in the United States, and in Michigan, is necessary. This will involve increasing societal resources devoted to the poor and raising the social benefits floor.

Consideration should be given to the idea discussed in the late 1960's and early 1970's of providing all families with a family allowance. This would not be a substitute for current programs but provide a minimum foundation of support for all families. A universal program would be less subject to the cyclical swings in coverage and support which have affected current means-tested food programs. A universal family support program would contribute to the elimination of hunger and would have other beneficial effects on health status as well. A renewed societal effort needs to be made to tackle the increasing problems facing the poor, who are disproportionately minorities, women, and children.

While ensuring adequate quantities of food are available to all, the public health and medical communities and social service agencies need to foster sound nutritional practices both in the administration of food programs and the provision of guidance to high risk populations. Minority clients and patients need to be given up to date nutritional information and the advice should take cognizance of cultural traditions and choices. Modification of dietary practices to achieve such goals as a reduction in obesity, although difficult to achieve, would have a significant impact on the health status of minority populations.

Notes

1. Personal communication from Sally Poux, Head Start Coordinator for Nutrition, 1988.
2. Personal communication from Gwen Williams, W.I.C. Coordinator, 1988.
3. Phone conversation with Jean Friend of the Office of Services to the Aging, April 12, 1988. Minorties include Blacks, Hisparics, Asians and Native Americans.
4. Personal communication from Gregory Plaskowski, Assistant Director, and Sandra McSweeney, Registered Dietitian (R.D.), Senior Resources, Inc., 1988.
5. Michigan Department of Agriculture. *Michigan Food Policy Report*, p. 8, 1987.

Section VI

RECOMMENDATIONS

Chapter Twenty-Three

RECOMMENDATIONS TO CLOSE THE GAP

There is a distressingly wide, and in some cases, growing gap in health status between Native American, Black, Hispanic, Asian and Pacific Islander, and Arab American populations and the White population in Michigan. Action to close the minority health gap will bring us closer together and benefit the entire state. Positive results will not be easily attained, but will require persistent and continuing attention now and in the years ahead.

Of particular assistance to the task force in its deliberations, were the reports of other high level groups that highlighted specific minority concerns. Many of the Recommendations from the Task Force on Infant Mortality, the Indian Health Task Force, the Black Child in Crisis Conference, the Task Force on Adolescent Health and others are already being placed into action by the Department of Public Health and other agencies in the Governor's Human Services Cabinet Council. These reports are added documentation of the need for urgent action to improve minority health. They are also a repository of additional important recommendations to the Human Services Cabinet Council.

A series of steps to be taken over the next two years are presented below. Some of these can be accomplished immediately by the Michigan Department of Public Health. Others will require cooperative effort from multiple units of state government, often in concert with our health partners in the business, labor, professional and voluntary community. These will be accomplished over the short term, by 1990. These measures, if fully implemented and continued over the long term, will help make it possible for the generation of minorities born in the twenty first century to enjoy health and longevity, equal to that of the White population.

It is essential that progress be monitored through the proposed Office of Minority Health and by the Director of Public Health with regular reports given to the Governor, the Legislature and Public.

Determinations on funding levels have yet to be made. It is believed that many existing funding streams can be refocused to address specific minority needs. New interventions must be culturally and language sensitive, and funded through community organizations. Creative public-private funding partnerships must be identified and implemented. Finally, individual action to promote one's own health and to avail oneself to accessible health care will also help to lift the burden of ill health from Michigan's minority populations.

Immediate Actions

I. An Office of Minority Health should be established in the Department Of Public Health.

The office should report to the Director of the Department and give persistent and continuing attention to minority health.

To advise and assist the office in accomplishing these objectives, the Governor should appoint an advisory committee, to serve under the jurisdiction of the Public Health Advisory Committee (PHAC). The leadership of the current task force should act in that capacity on an interim basis until permanent arrangements are made. The chairperson of the Minority Health Advisory Subcommittee should be an appointed member of the PHAC. Special efforts should also be made to assure minority representation on other departmental ongoing advisory groups.

The office should be established by executive action and subsequently be placed into law in the Public Health Code (Act 368, P.A. 1978).

Among the most important functions of the office are:

- Investigate and report to the Director of Public Health, Governor and Legislature on conditions affecting the health and welfare of minorities.
- Advise the Director of Public Health and the Governor's Human Services Cabinet on remedies for eliminating the gap between minority and majority health status.
- Advocate for adoption and implementation of effective measures to improve minority health.

- Provide consultation and technical assistance to agencies and groups attempting to improve minority health programs.

- Fund community-based organizations to conduct special research, demonstration and evaluation projects designed to develop model programs.

- Increase public and intergovernmental awareness of minority health concerns.

- Form and coordinate a network of community health action teams to implement programs and monitor results.

Discussion.
An Office of Minority Health should be established in the Department of Public Health to give persistent and continuing attention to eliminating the gap in health status between minorities and Whites in Michigan. The Office should be a vehicle for increasing public and governmental awareness of the racial gap in health status and for making the closing of the gap the highest public health priority. The Office should assist other units of the Department in contributing to the goal of closing the racial gap in health status. Given its Department-wide responsibilities, the Office should be located within the Director's Office and be headed by an experienced minority public health professional. The current Indian Health Program, together with its Departmentally appointed advisory committee, should be incorporated into the Office on Minority Health.

To help ensure a continuing commitment the Office of Minority Health should be established as a permanent part of the Department's structure. Such a revision of the Public Health Code will reinforce the idea that the goal of closing the minority health gap is one which will bring us all together. Closing this gap is a task not for minorities alone but for our state as a whole. Action by the state legislature to establish the Office of Minority Health in the Public Health Code will give increased visibility and a sense of permanence to the effort which lies ahead.

To advise and assist the Office in accomplishing these objectives, the Governor should appoint an ongoing Advisory Committee on Minority Health consisting of representatives from the following groups: public and private agencies, community organizations, the medical profession, institutional providers, and representatives of all the minority groups discussed in this report. A broad based group is needed since many of the actions necessary to reduce the health gap will require coordination of efforts between state departments, health providers, federal and local government agencies, and leaders in the minority communities. The Advisory Committee should be a subcommittee of the Governor appointed Public Health Advisory Committee (PHAC) which is the highest ranking Advisory Group in the Department. The chairperson of the Minority Health Subcommittee should be a member of the PHAC.

Among the important duties of the office are: provision of consultation and technical assistance, funding of demonstration projects to develop model interventions in communities, assisting other departmental units to target resources to serve the pressing needs of minorities and development of improved data collection procedures.

The office should monitor the health status of minority groups in Michigan, and produce annual reports on the progress made in reducing the health status gap.

Finally, the office should work cooperatively with the other Human Services Agencies in state government to investigate the need for and desirability of a Commission on Minority Health. A Commission appointed by the Governor would function as an interdepartmental coordinating body, helping to ensure that state government as a whole initiates and implements policies which contribute to improving minority health.

II. Data collection on minority health status must be improved by state and local public health system, hospitals and other health agencies.

The Department of Public Health and the Office of Health and Medical Affairs should improve collection of minority-specific birth, morbidity and mortality data on Blacks, Hispanics, Native Americans, Asian and Pacific Islanders, and Arab Americans. Improved data collection is necessary for monitoring health status, planning appropriate services, and evaluating program effectiveness. The Office of Minority Health (Recommendation I) should assist department units with data collection responsibilities. The Department of Public Health should distribute information on the best methods to collect accurate information and provide training opportunities to other Human Service agencies public and private health agency personnel.

Among the most important steps are:

- Include items to more accurately identify members of each minority group on revised birth and death certificates.
- Distribute information on the best methods to collect accurate information and provide training to public and private data collection personnel.
- Conduct special surveys and epidemiological studies of minority health status and integrate them with ongoing health research activities.

Discussion.
Data on non-Black minorities is often unavailable, particularly in the case of Hispanics and Arab Americans. Even when available, data for Native American Indians and Asian and Pacific Islanders are often poor in quality because data collection personnel have not been trained to ask respondents their race or ethnicity. The Office of Minority Health should assist public and private Human Services Agencies with data collection responsibilities.

The Department of Public Health should include instructions on the proper methods for completing race and ethnic items on Department health forms in its training plan for Department personnel who have responsibilities in data collection. The Department should adapt this training program and make it available to personnel of other agencies interested in improving the accuracy of data collection efforts with respect to minority groups.

The Department should prepare a publication explaining the value of and appropriate methods for collecting race and ethnic specific information for distribution to the general public and to personnel with data collection responsibilities in both private and public agencies.

And in developing new data systems such as nutrition monitoring or spinal cord injury registry and in the conduct of health risk assessments, the Department should ensure that accurate race and ethnic data is collected. There should be a special emphasis on monitoring diseases and conditions, such as diabetes, which disproportionately affect minorities.

Finally, the Department should explore the feasibility of conducting special surveys and epidemiological studies to obtain accurate morbidity and risk prevalence data on minorities in Michigan. For example, reduction in teenage pregnancy will require additional understanding of interventions which include young males as well as females. Also, existing surveys might conduct "over sampling" of minority groups so that more accurate scientific databases are available to make projections of risk factors and health status.

FurtherActions— 1988 to 1990

III. The Department of Public Health and the Governor's Human Services Cabinet Council should encourage private businesses, labor unions, religious organizations, community groups and civic groups to include closing the minority health gap among their highest priorities.

Given the evidence of the vital importance of employment in improving the health status and general well-being of minority communities, the Governor, Human Services Cabinet Council, the Governor's Cabinet Council on Human Investment, the Cabinet Council on Jobs and Economic Development and the Legislature should improve employment opportunities for minorities.

Measures to be taken over the short term include:

- Inform business, labor union and the public about the value of job development in improving minority health status.
- Create public-private enterprise partnerships targeting the job needs of central cities.
- Assure that the policies and practices of health providers and insurance companies are equitable and culturally and linguistically sensitive.
- Promote affirmative action employment goals throughout the health care industry.

Discussion.
Jobs provide the basis for well-being of families and communities. The association between economic well-being and good health status is evident across a wide range of indicators.

Cooperative efforts in the public and private sectors designed to close the racial gap in health status are needed. Private businesses, labor unions, religious organizations, community groups, civic organizations, and state and local agencies need to be encouraged to include closing the racial gap among their priorities. The Department should promote an awareness of the multifaceted causes for the relatively poor health status of minorities and the importance of a multi-dimensional community-wide effort to tackle these underlying causes. The Human Services Cabinet should critically review,

monitor, and coordinate activities in a variety of areas which can have a positive impact on minority health status.

Providers of health services, local and state agencies administering health programs, insurance companies, and planning bodies should contribute to the reduction in the racial gap in health status by ensuring that their policies and practices are equitable and culturally and linguistically sensitive. The Department should communicate its willingness to assist all those participating in health care networks with improving policies and practices designed to enhance minority health status. Once established, the Office of Minority Health can serve as a resource for community agencies in improving their practices and policies by providing information and technical assistance.

Finally, the Human Services Cabinet should strengthen awareness of the need for private-public development partnerships to target the needs of central cities. The economic well-being of central cities is vital to the social well-being and improved health status of the minority population in Michigan. The greatest gains in the health status of the population as a whole will come from targeting the groups with the most excessive morbidity and mortality rates. An alliance between minorities and non-minorities and between central cities and the state will contribute to gains in minority health status and gains in the health status of the population as a whole.

IV. Significant programs to improve minority health status should be funded. Health promotion, disease prevention, and risk reduction should be areas of special emphasis.

A. To reduce violence, the Departments of Public Health and Social Services working with the Human Services Cabinet should launch a coordinated intergovernmental campaign. Aspects of such a campaign include:

- Promote parenting skills programs to aid families in their childrearing efforts and encourage them to use non-violent discipline.

- Develop programs to assist youth to learn non-violent conflict resolution skills and how to deal with stress, depression, anger, and suicidal feelings as part of the Michigan Model for Comprehensive School Health Education.

- Expand pre-school classes to reach minority three and four year olds throughout Michigan.

- Encourage school programs that build children's self-esteem, independence, and hopefulness about their future.

- Expand the summer jobs for youth program to reach all unemployed youth in the state.

Discussion.

Traditionally, problems of violence and homicide have been left to the criminal justice system. Prevention of homicide should be viewed as a public health issue and approached in that framework. In the case of homicide, primary prevention efforts need to be directed at those social, cultural, technological, and legal aspects of the environment which perpetuate high homicide rates. The following are examples of primary prevention efforts:

1. Develop a new health promotion campaign specifically focused on homicide. The purpose is to increase public and professional awareness that homicide is a serious public health problem in Michigan about which something can and must be done. The message should be culturally relevant and feature appropriate role models who are suitable for the target population.

2. Work with colleges and universities to incorporate into the curricula of medical schools, nursing schools, schools of social work, and continuing professional education information on homicide and other types of violence.

3. Work with communities interested in developing campaigns designed to reduce the risk of gun-related injuries and deaths. Activities might include the development of community-based organizations to combat violence, educational efforts emphasizing the importance of keeping guns out of the reach of children, the incorporation of conflict resolution curriculum modules in schools, and the preparation of a model local gun control ordinance.

Efforts at secondary prevention of homicide should be directed to individuals who show early signs of behavioral and social problems that have been linked to increased risks of subsequent homicide. Family violence, childhood aggression, school violence, adolescent violence, and alcohol and drug abuse are important focal points for efforts at secondary prevention of homicide.

Efforts at tertiary prevention of homicide should be directed towards violence between intimates and acquaintances that are associated with elevated risk for homicide.

1. Improved medical protocols need to be developed for identifying victims of domestic violence. Many of these persons are not identified as battering victims because they do not volunteer this information and are not questioned about possible battering. According to the *Report of the Secretary's Task Force on Black and Minority Health*, a model emergency room protocol has been developed for hospitals in the State of New York and can be adapted for use elsewhere.

2. Develop a community-based program that deals with the violence that develops between rival youth gangs. One such program has worked to prevent a resurgence of gang violence through communication with concerned parties and organizational efforts to combat the environmental and social conditions that foster gang violence.

B. Programs dealing with environmental hazards should be expanded. The following actions should be taken:

- Establish statewide minimum housing standards.
- Assure the rights of communities and workers to know about important environmental hazards, such as exposure to agricultural pesticides.
- Expand rodent control programs and control exposure to illegal toxic chemicals such as "roach milk."
- Reduce hazards of the indoor environment such as lead poisoning, asbestos and radon.

Discussion.
Programs dealing with environmental hazards, such as rodent and insect infestations, exposure to toxic chemicals including pesticides, hazards of the indoor environment such as lead poisoning, asbestos, radon, and substandard and unsanitary housing, should be expanded. The absence of statewide minimum housing standards is of particular concern in minority communities, which have a disproportionate share of poor housing.

Additional dimensions of the housing situation are the growing problem of homelessness, particularly among minorities, and the negative impact of abandoned housing on the public health and quality of life in many neighborhoods.

Action should be taken to terminate the distribution of illegal pesticides ("roach milk") in urban minority communities. Another important environmental concern is ensuring the rights of both workers and communities to know about environmental hazards. The rights of agricultural workers to be informed about potential environmental hazards from the pesticides with which they work is of particular concern.

C. New health promotion and chronic disease prevention and control efforts are slated to be funded under the Michigan Health Initiative (Act 258, P.A. 1987). These new activities should reach and benefit minority group employees. Risk reduction program expansion is especially needed for drug, alcohol, and tobacco prevention and in hypertension and diabetes. The problem of AIDS is taking a disproportionate toll on minorities and special efforts will be needed.

- Worksite wellness programs should target medium and small employers (under 500 employees) with high percentages of minorities in their work force.

- AIDS prevention and control programs should reach and benefit minority populations.

- Substance Abuse Prevention and control programs should emphasize alcohol and tobacco risk factor reduction in minority populations.

- Publicly funded food programs should provide culturally sensitive alternative foods to minority recipients. Economic and logistical barriers to obtaining food should be removed.

- Hypertension screening, referral and follow-up services and diabetes outpatient education should be designated as basic health services.

- Assistance with payment for medications to clients with hypertension, diabetes, and other chronic conditions requiring medication should be provided.

- Services to chronically ill children should be improved by establishing a functional birth defects registry and increasing family assessment and case management services.

Discussion.
Given the high risk status and the relatively greater burden of morbidity and mortality experienced by minorities for diseases of the heart, cancer, cirrhosis of the liver, diabetes, and AIDS, categorical programs in these areas should give priority to serving high risk minority populations. In designing new worksite health promotion programs under the Michigan Health Initiative, the Department should ensure that such programs reach and benefit minority group employees. The following specific chronic disease and health promotion policy changes would have particular benefit for minorities:

1. Establish hypertension screening, referral and follow-up services as a basic health service. The increase in the prevalence of uncontrolled hypertension among minorities in recent years is of great concern. Modalities for treatment and control of hypertension are effective if clients receive appropriate services. Expanding the availability of these services could be an important step in reversing the deterioration in hypertension control in minority communities.

2. Ensure universal reimbursement for comprehensive diabetes education services. Given the complexity of managing diabetes, most experts regard comprehensive diabetes education as an essential feature of the treatment of diabetic patients. Medicaid and Medicare already reimburse for outpatient

diabetes education services. The state should ensure that diabetic patients not covered by Medicaid and Medicare also receive this essential service.

3. Provide assistance with payment for medications to clients with hypertension, diabetes, and other chronic conditions requiring medication would be of great benefit to those with low income. Efforts at bringing patients under treatment are often defeated if the patients are unable to pay for medications.

4. To improve services to chronically ill children, a functional birth defects registry should be established. Such a registry would provide more effective case finding. In addition, increased resources needed to provide for family assessment and case management services.

5. There are a number of economic and logistical barriers that stand between the citizens of Michigan and an economical and nutritious food supply. It is essential to provide the necessary investment in transportation at the state and local level, for improved access to the food supply for all citizens.

Risk reduction program expansion is needed for drug and alcohol abuse prevention and treatment programs and tobacco use prevention and cessation programs. Michigan drug and alcohol treatment programs, many of whose clients are minorities, have long waiting lists. The problem with smoking cessation programs, on the other hand, is that few are accessible to minorities. Prevention programs directed at minority communities are needed in the areas of drug and alcohol abuse and smoking.

V. Awareness of minority health concerns should be expanded and educational opportunities for minorities in the health professions should be increased.

A. A massive campaign to educate the health provider community about the gap in minority health status is needed. This campaign must be culturally and linguistically sensitive. Actions needed include:

- Develop and disseminate orientation materials for employees on the historical experiences and health needs of each racial minority group.

- Create a multi-media educational campaign on minority health status, giving special attention to counteracting the efforts of alcohol and tobacco companies who are targeting the minority community to increase sales.

Discussion.
The Department should provide educational curricula to sensitize all of its employees to the historical and cultural experiences and the specific health needs of each of the racial minorities in Michigan. The educational modules should be incorporated into the orientation program for all new employees and be required for all current employees. The Department should disseminate these curricula to local health agencies, health facilities, and other interested parties.

The Department should help develop a multi-media educational campaign on minority health status similar in scope and concept to the AIDS education effort. AIDS is not a problem for high risk groups alone nor is the racial gap in health status a problem for minorities alone. The excessive years of potential life lost, the alarming number of minority infant deaths, the heavy toll that violence takes in minority communities, the human and economic burden of frequent hospitalizations for the major chronic diseases, affect the entire society. All of us need to contribute to reducing the gap in health status by becoming more aware of the underlying causes of these problems and supporting programs which address these problems.

In addition to increasing general awareness of the causes of poor health status in minority populations, the media campaign should be aimed at improving or changing the lifestyles and health seeking behavior of minority group members. The information should be conveyed in a manner sensitive to the culture and appropriate to the languages and reading levels of minority groups in Michigan. One goal of the media campaign should be to counteract the efforts of tobacco companies to target sales of their products, the leading cause of preventable mortality, to minority communities.

The Department should ensure that culturally and language sensitive materials designed to serve the needs of each of the minority groups in Michigan be included in the risk reduction clearinghouse and media campaign to be developed under the Michigan Health Initiative.

B. Strong efforts are required to bring large numbers of minorities in the health caring professions. Actions needed over the short term include:

- Develop community coalitions to reduce high school drop out rates.
- Working with the State Board of Education, develop a plan to increase minority college enrollments generally and in graduate level training for the health professions.
- Reinstitute the Master's of Public Health scholarship program for minority students at the University of Michigan School of Public Health.

- Working with the Department of Civil Service, expand the pool of minority applicants for health careers in state government.

- Continue to implement state Affirmative Action Programs to ensure that minority individuals are included as staff members at all levels of state government in proportion to their representation in the state population.

Discussion.
Coalitions for educational reform should include solving such symptomatic problems of crisis among minority youth as the excessive high school drop out rates and low college enrollment rates. Providing young people with a good education, self-esteem, and a sense of hope in the future will have an enormous impact on overall health status and on the future development of our state.

The State Board of Education should work with all colleges and universities in the state to develop a plan to increase the number of minorities in all health-related programs. Features of such a plan include stepped up recruitment efforts, working with counselors in the high schools to promote health programs, expanding the availability of scholarships and other forms of financial assistance, and strengthening retention programs.

The Department of Public Health should work with the Department of Mental Health and other state departments to expand the pool of minorities interested in health careers in state government by encouraging interest among secondary school students and recruiting college and university students.

The State Board of Education should work with and encourage colleges and universities to develop a minority health curriculum for inclusion within the academic curricula of all health-related schools. In addition, the Board should assist colleges and universities in the development of training programs so that health care providers such as physicians, nurses, dentists, industrial hygienists, sanitarians, public health engineers, health educators, social workers, lay counselors, allied health professionals, and volunteers may gain increased awareness of and sensitivity to the health problems and health attitudes, beliefs, and concerns of minority populations.

The Department should reinstitute the Master's of Public Health scholarship program for students at the University of Michigan School of Public Health. When in existence, the program facilitated the public health education of a generation of minority health professionals. Reversing the decline in the number of minorities being trained in public health is necessary if the health care system is to be more responsive to needs of minority patients.

Finally, minority representation should be included on Michigan department advisory boards, task forces, and commissions to assist the departments in ensuring that programs target minority communities and are implemented in a culturally sensitive manner. In

addition, the state should continue to implement its Affirmative Action Programs to ensure that minority individuals are included as staff members at all levels of state government in proportion to their representation in the state population.

VI. The Human Services Cabinet should work to identify and implement additional recommendations from recent task forces and advisory bodies which impact on minority health.

Discussion.
Many state task forces in recent years have addressed minority health issues. They include such diverse areas as Infant Mortality, Indian Health, Hispanic Needs Assessment, Black Children in Crisis, Adolescent Health, and others. Many of these recommendations in these reports have been implemented. However, the Human Services Cabinet should again review these documents and consider adopting additional recommendations. For example, the following recommendations of the Task Force on Infant Mortality have important implications for improving minority health status and consideration should be given by the Cabinet to:

1. Improve and expand prenatal and postnatal care for high risk women.

2. Expand outreach efforts and public information targeted at high risk women.

3. Expand maternal support services to ensure comprehensive care to at risk women and their infants.

4. Decrease the number of unintended pregnancies by expanding family planning services.

The Office of Minority Health should provide staff assistance for these activities.

In addition, the new Governor's Task Force on Access to Care should:

- Assure that the health service delivery system is sensitive to the cultural and linguistic needs of minority groups.

- Incorporate a specific focus on access to care by minorities.

Glossary

Age-Adjusted Death Rate
A summary rate of death that is developed using a standard population distribution to improve comparability of rates for areas or population subgroups with different age distributions. When calculated by the direct method, as in this report, age-specific death rates for a geographic area or population subgroup are multiplied by the standard population by specific age and the products summed and divided by the total standard population. Age-adjusted death rates represent the mortality experience that would have occurred had the age-specific rates of the area or population subgroup been experienced by the standard population. These rates are presented as per 100,000 population.

Age-Specific Birth Rate
Number of resident deaths divided by the total resident population x 1000.

Age-Specific Death Rate
Number of deaths in specific age group divided by the total resident population in specific age group x 1000.

Birth Weight
Weight of fetus or infant at the time of delivery (normally recorded in pounds and ounces).

Communicable Disease Case Rate
Number of reported cases of a specific communicable disease divided by the total resident population x 100,000.

Crude Birth Rate
Number of resident live births divided by total resident population x 1000.

Crude Death Rate
Number of resident deaths divided by the total resident population x 1000.

Excess Deaths
Difference between the number of deaths observed for a population and the number of deaths expected if that population had experienced the same age-specific death rates as a standard population.

Fertility Rate
Number of resident live births divided by the total female population (15-44 years-old) x 1000.

Incidence
Frequency with which a disease (or health problem) arises during a defined period of time.

Infant Death
Death occurring to an individual less than one year of age.

Infant Mortality Rate
Number of infant deaths divided by the total resident live births x 1000.

Low Weight Birth
Birth in 1984 or later wherein the birth weight is less than 2500 grams (approximately 5 lbs., 8 oz.) or birth weight before 1984 wherein the birth weight is 2500 grams or less.

Mortality Rate
Number of deaths divided by the total resident population x 1000.

Neonatal death
Death occurring to individual less than 28 days of age.

Perinatal Death
Fetal death or death under one week of age.

Prevalence
Amount of disease (or health problem) in population at a particular time, regardless of the time of its onset.

Years of Potential Life Lost (YPLL)
Number of years lost due to death occurring before a predetermined end point, such as 65 years. YPLL calculations for specific causes are based on the underlying cause of death.

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